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**Soil Boring Report  
Parcel A**

**Boeing Realty Corporation C-6 Facility  
Los Angeles, California**

**March 1998**



**MONTGOMERY WATSON**

**SOIL BORING REPORT  
PARCEL A**

**BOEING REALTY CORPORATION C-6 FACILITY  
LOS ANGELES, CALIFORNIA**

**March 1998**

**Prepared For:**

**BOEING REALTY CORPORATION  
4060 Lakewood Boulevard, 6th Floor  
Long Beach, California 90808**

**Prepared By:**

**MONTGOMERY WATSON  
250 North Madison Avenue  
Pasadena, California 91101**

## TABLE OF CONTENTS

<u>Section</u>		<u>Page No.</u>
<b>1.0</b>	<b>INTRODUCTION</b>	1-1
<b>2.0</b>	<b>FIELD ACTIVITIES</b>	2-1
	2.1 Drilling and Sampling Procedures	2-1
	2.2 Decontamination, Containment, and Abandonment	2-1
	2.3 Quality Assurance/ Quality Control	2-2
	2.4 Analytical Program	2-2
<b>3.0</b>	<b>RESULTS AND CONCLUSIONS</b>	3-1
	3.1 Soil Character	3-1
	3.2 Analytical Results	3-1
	3.3 Conclusions	3-1
<b>4.0</b>	<b>REFERENCES</b>	4-1

### Appendices

- A - Figure1 and Table 1
- B - Boring Log
- C - Laboratory Analytical Reports

## **SECTION 1.0**

### **INTRODUCTION**

In October 1996, Montgomery Watson (Montgomery) was retained by McDonnell Douglas Realty Company, now the Boeing Realty Corporation (BRC), to assist with the redevelopment of Parcel A (the Site) of their C-6 Facility located in Los Angeles, California. The Site consists of the northernmost quarter of the C-6 Facility, encompassing approximately 50 acres.

This document is provided as an addendum to the *Stockpile and Post-Remedial Excavation Confirmation Sample Report, Parcel A, Report No. 4* (Montgomery Watson, 1998; "the Report"). The purpose of this document is to present soil quality data collected from a deep soil boring drilled to assess the depth of diesel-affected soil at the above-referenced Site.

As presented in the Report, Open Area No. 1 is located along the eastern portion of the Site, east of Building 37 and Building 41 extending to the Normandie Avenue property boundary. Open Area No. 1 was so designated because of its absence of structures, except for the former Building 43/44 water tanks in the northeast corner.

Building 41 was formerly used as a boiler house. The water tanks located at Building 43/44 in the northeast corner of Open Area No. 1 were formerly used to store diesel fuel oil which was pumped into Building 41 through buried product pipelines. These tanks were converted from diesel storage to water tanks (part of the C-6 facility's fire suppression system) approximately 25 years ago. The abandoned product lines leading from the tanks to Building 41 were discovered during the demolition process, and remedial excavations discussed in the Report were conducted to remove primarily hydrocarbon-affected soil associated with releases from these product lines.

Remedial excavations associated with the hydrocarbon-affected soil are described in the Report. The maximum excavation depth was approximately 12 feet; however, residual hydrocarbon-affected soil was present at the depth of 12 feet at remedial excavation OA1-RE-1.

At the request of the Regional Water Quality Control Board (RWQCB), a deep soil boring was advanced to assess the vertical extent of the affected soil at remedial excavation OA1-RE-1. The boring was located at the elbow in the product lines where residual hydrocarbons at the depth of 12 feet were present in concentrations above soil screening levels in confirmation sample OA1-GS-14-12', as presented in the Report. The location

of the boring is presented in Figure 1 (Appendix A). The boring was designated "PL-B1" (representing "Product Lines-Boring No. 1").

## **SECTION 2.0**

### **FIELD ACTIVITIES**

Field activities were performed on May 17, 1997. All work was performed under the direction of a California Registered Geologist and in accordance with a site-specific health and safety plan. Montgomery Watson subcontracted drilling services to advance boring PL-B1, and provided a California Registered Geologist in the field to oversee the drilling and sampling activities.

Soil samples and quality assurance/quality control samples were collected for analysis in accordance with procedures outlined in the *Sampling and Analysis Plan for Demolition Activities at the Douglas Aircraft Company C-6 Facility* prepared by Integrated Environmental Services, Inc. (IESI, 1997) which was previously submitted to and approved by the RWQCB.

#### **2.1 DRILLING AND SAMPLING PROCEDURES**

A truck-mounted mobile drill rig equipped with 6-inch outer diameter hollow-stem augers was used to advance boring PL-B1 to the total depth of 50 feet beneath grade level (bgl) (38 feet beneath the base of remedial excavation OA1-RE-1). During drilling of boring PL-B1, soil samples were retrieved at 5-foot intervals for the purpose of describing the soils. The soil samples were screened for volatile organic vapor content in the field using a photoionization detector (PID). PID readings are included on the boring log (Appendix B).

Soil samples were retrieved for chemical analysis at depths of 20, 30, 40, and 50 feet bgl and designated PL-B1-20', PL-B1-30', PL-B1-40', and PL-B1-50', respectively. The soil samples were retrieved using a California modified split-spoon sampler equipped with precleaned stainless steel sample sleeves.

Two sample sleeves were retained for analysis at each sampling interval. Upon retrieval, the ends of the sample sleeves were covered with Teflon swatches, capped with plastic end caps, labeled, placed in ziploc bags, logged on a chain-of-custody form, and stored in a cooler chilled with blue ice.

#### **2.2 DECONTAMINATION, CONTAINMENT, AND ABANDONMENT**

The split-spoon sampler was decontaminated prior to each use by the following method:

- Wash with Alconox and tap water.
- Rinse with tap water.

- Double rinse with distilled water.

Soil cuttings and cleaning rinsate were stored on-site in Department of Transportation-approved 55-gallon steel drums pending proper disposal. Boring PL-B1 was backfilled upon completion with hydrated bentonite chips

## **2.3 QUALITY ASSURANCE/QUALITY CONTROL**

The following quality assurance/quality control (QA/QC) samples were collected:

- 1) One rinsate blank consisting of laboratory-grade deionized water poured through a precleaned sampling sleeve to assess cross-contamination from the sampling equipment.
- 2) One equipment blank consisting of laboratory-grade deionized water poured through a cleaned split-spoon sampler to assess the effectiveness of the decontamination process.
- 3) One trip blank consisting of deionized water provided by the laboratory to assess cross-contamination from sample handling procedures.

## **2.4 ANALYTICAL PROGRAM**

Soil samples PL-B1-20', PL-B1-30', PL-B1-40', PL-B1-50', and the QA/QC samples were submitted under chain-of-custody documentation to a state-certified laboratory for chemical analysis. Each sample was analyzed for the following constituents:

<u>EPA Method</u>	<u>Analyte(s)</u>
8260	Volatile Organic Compounds (VOCs)*
8270	Semi-volatile Organic Compounds (SVOCs)
6000/7000	CCR Title 22 metals
8080	Pesticides and PCBs **

\* The trip blank was analyzed for volatile organic compounds only.

\*\* Rinsate blank and equipment blank only.

## SECTION 3.0

### RESULTS AND CONCLUSIONS

#### **3.1 SOIL CHARACTER**

The soils encountered in boring PL-B1 were logged in accordance with the Unified Soil Classification System. The soil encountered consisted of silt and sandy silt from 12 to 27 feet bgl; silty sand and sandy silt from 27 to 39 feet bgl; clayey silt and silt from 39 to 50 feet bgl. Groundwater was not encountered in boring PL-B1. Soil descriptions are presented on the enclosed boring log.

#### **3.2 ANALYTICAL RESULTS**

Analytical data are summarized in Table 1 and discussed below.

**VOCs:** A total of eight VOCs were detected in samples collected from the depths of 20 feet, 30 feet, and 40 feet bgl. VOCs were not detected in the sample collected from 50 feet bgl.

**SVOCs:** A total of 13 SVOCs were detected in samples collected from the depths of 20 feet, 30 feet, and 40 feet bgl. SVOCs were not detected in the sample collected from the depth of 50 feet bgl.

**Metals:** All metal concentrations were less than total threshold limit concentrations (TTLC) and 10 times the soluble threshold limit concentrations (STLC).

**QA/QC Samples:** Analytes were not detected in the QA/QC samples.

Laboratory analytical data sheets are presented in Appendix C.

#### **3.3 CONCLUSIONS**

The data suggest that chemicals of concern in soil are confined to the upper 50 feet bgl.

Analytes were not detected in the rinsate blank, indicating that the precleaned sampling sleeves did not compromise the data quality. Analytes were not detected in the equipment blank, indicating that the decontamination procedures were effective and did not compromise the data quality. Analytes were not detected in the trip blank, indicating that sample handling techniques did not compromise the data quality.

## **SECTION 4.0**

### **REFERENCES**

Integrated Environmental Services, Inc., Sampling and Analysis Plan for Demolition Activities at the Douglas Aircraft Company C-6 Facility, 1997.

Montgomery Watson, Stockpile and Post-Remedial Excavation Confirmation Report, Parcel A, Report No. 4, Boeing Realty Corporation C-6 Facility, Los Angeles, California, 1998.

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## **Appendix A**

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**MONTGOMERY WATSON**

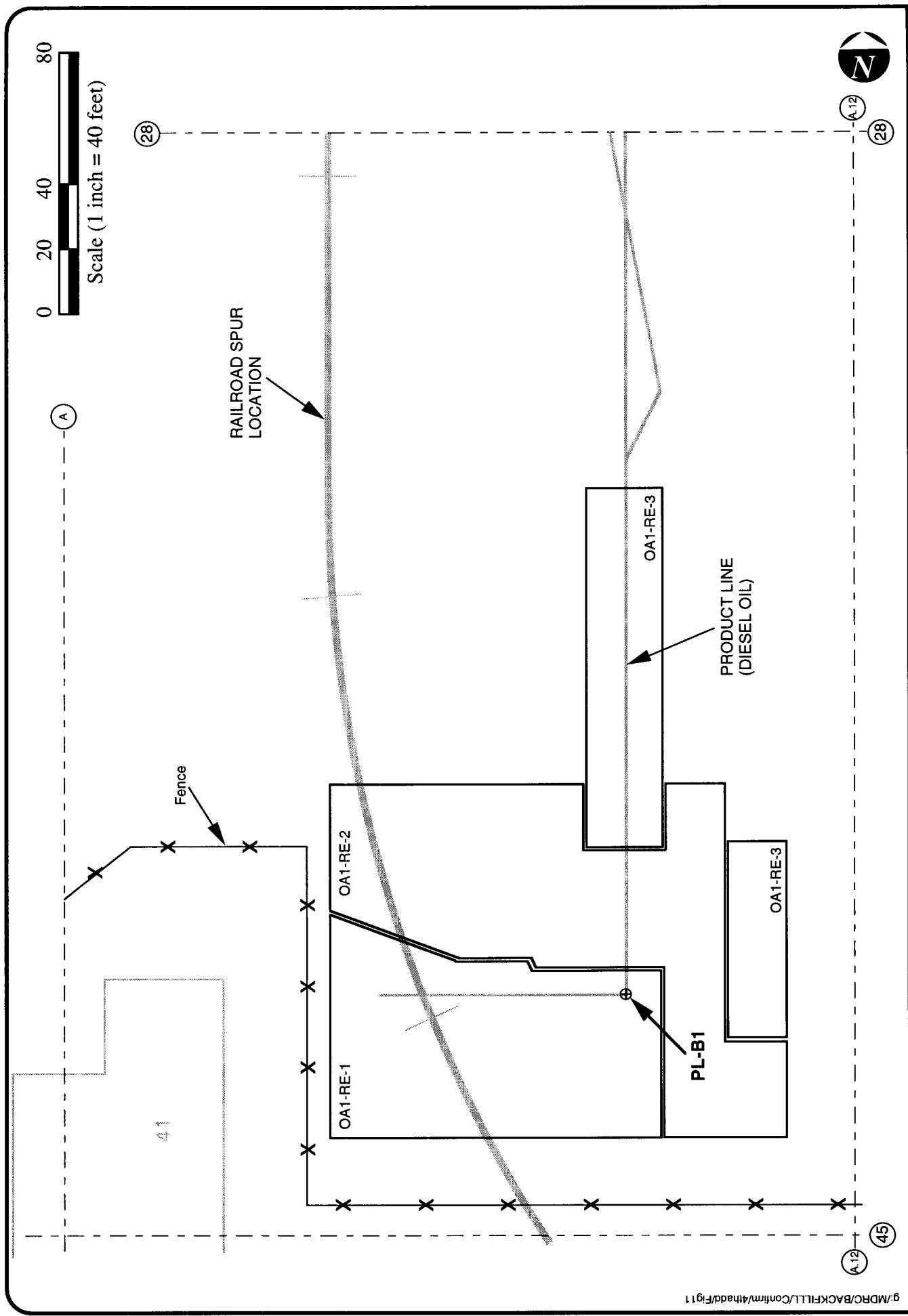


FIGURE 1

**BOEING REALTY CORPORATION**  
**C-6 FACILITY**  
**Soil Boring PL-B1 Location**

**TABLE 1**  
**Analytical Data Summary**  
**Soil Boring PL-B1 Samples**

Analyte	EPA Method	Sample Number, Depth, and Collection Date				Regulatory Levels TTLC (mg/kg)	STLC (mg/L)
		PL-B1-20' 20' bgl*	PL-B1-30' 30' bgl*	PL-B1-40' 40' bgl*	PL-B1-50' 50' bgl*		
TRPH (mg/kg)	418.1	--	--	--	--		
<b>Title 22 Metals (mg/kg)</b>							
Antimony	6010	<5.00	<5.00	<5.00	<5.00	500	15
Arsenic	6010	<1.00	<1.00	<1.00	<1.00	500	5
Barium	6010	140.00	120.00	160.00	120.00	10,000	100
Beryllium	6010	<0.10	<0.10	<0.10	<0.10	75	0.75
Cadmium	6010	<0.10	<0.10	<0.10	<0.10	100	1
Chromium (VI)	7196	<0.50	<0.50	<0.50	<0.50	500	5
Chromium (total)	6010	31.00	33.00	37.00	36.00	2,500	5 **
Cobalt	6010	7.30	5.40	8.50	8.50	8,000	80
Copper	6010	15.00	22.00	23.00	28.00	2,500	25
Lead (total)	6010	<1.00	<1.00	<1.00	<1.00	1,000	5
Mercury	7471	<0.01	<0.01	<0.01	<0.01	20	0.2
Molybdenum	6010	<0.50	<0.50	<0.50	<0.50	3,500	350
Nickel	6010	13.00	16.00	17.00	18.00	2,000	20
Selenium	6010	<1.00	<1.00	<1.00	<1.00	100	1
Silver	6010	<0.10	<0.10	<0.10	<0.10	500	5
Thallium	6010	<5.00	<5.00	<5.00	<5.00	700	7
Vanadium	6010	33.00	40.00	44.00	45.00	2,400	24
Zinc	6010	45.00	59.00	62.00	57.00	5,000	250
<b>VOCs (1)(µg/kg)</b>							
Ethylbenzene	8260	5,000.00	2,000.00	1,400.00	<2.50		
Toluene	8260	<1,000.00	<1,000.00	690.00	<2.50		
Total Xylenes	8260	12,000.00	28,000.00	12,000.00	<2.50		
n-Propylbenzene	8260	2,500.00	1,400.00	910.00	<2.50		
1,3,5-Trimethylbenzene	8260	15,000.00	14,000.00	5,900.00	<2.50		
1,2,4-Trimethylbenzene	8260	45,000.00	42,000.00	19,000.00	<2.50		
n-Butylbenzene	8260	3,100.00	2,500.00	1,300.00	<2.50		
Naphthalene	8260	120,000.00	110,000.00	36,000.00	<2.50		
<b>SVOCs (1)(µg/kg)</b>							
Acenaphthene	8270	6,500.00	2,700.00	<2,000.00	<100.00		
Anthracene	8270	7,400.00	3,200.00	3,300.00	<100.00		
Benzo (a) Anthracene	8270	11,000.00	3,400.00	4,200.00	<100.00		
Benzo (g,h,i) Perylene	8270	7,800.00	<5,000.00	<5,000.00	<250.00		
Benzo (a) Pyrene	8270	13,000.00	<5,000.00	<5,000.00	<250.00		
bis (2-Ethylhexyl)Phthalate	8270	2,300.00	<2,000.00	<2,000.00	<100.00		
Chrysene	8270	22,000.00	7,500.00	7,500.00	<100.00		
Fluoranthene	8270	5,700.00	<2,000.00	<2,000.00	<100.00		
Fluorene	8270	16,000.00	6,300.00	6,400.00	<100.00		
2-Methylnaphthalene	8270	250,000.00	100,000.00	95,000.00	<100.00		
Naphthalene	8270	78,000.00	27,000.00	20,000.00	<100.00		
Phenanthrene	8270	73,000.00	28,000.00	29,000.00	<100.00		
Pyrene	8270	51,000.00	18,000.00	20,000.00	<100.00		
<b>Carbon Chain Range (mg/kg)</b>							
PCBs (µg/kg)	8080	--	--	--	--		

mg/kg = milligrams per kilogram

SVOCs = Semi-volatile Organic Compounds

µg/kg = micrograms per kilogram

TRPH = Total Recoverable Petroleum Hydrocarbons

mg/L = milligrams per liter

PCBs = polychlorinated biphenyls

-- = not analyzed

(1) VOCs and SVOCs not listed were not detected

bgl = below original grade level

TTLC = California Total Threshold Limit Concentration

VOCs = Volatile Organic Compounds

STLC = California Soluble Threshold Limit Concentration

\* Refer to Figure 1 for sample location

\*\* STLC is 560 mg/L when TCLP is performed and result is less than 5 mg/L per CCR Title 22.

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## **Appendix B**

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**MONTGOMERY WATSON**

**MONTGOMERY  
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## LOG OF TEST BORING

Project The Boeing Company  
C-6 Facility  
Location Los Angeles, CA

Boring No. PL-B1  
Surface Elevation 39.39 ft. MSL  
Job No. 1206035.01090010  
Sheet 1 of 2

250 N. Madison Ave., P.O. Box 7009, Pasadena, CA 91109, TEL. (818) 796-9141

No.	M oist (in.)	Rec (in.)	Moist	N	Depth	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES	
							PID	Remarks
1	18	M	17 19 21		5 10 15	Base of Remedial Excavation - Started Drilling Here (Elevation = 39.39 ft MSL)		Time: 0812
2	18	M	17 19 24		20	SILT (ML): Hard, Gray, 95% Silt, 5% Clay with Moderate Plasticity, Hydrocarbon Odor	122.9	Time: 0815
3	13	M	31 50		25	SILT (ML): Hard, Brown-Gray, 95% Silt, 5% Fine Sand, Hydrocarbon Odor	139.3	Time: 0820 Sample PL-B1-20'
4	18	M	18 34 41		30	Sandy SILT (ML): Very Hard, Brown and Gray, 75% Silt, 25% Very Fine Sand, Hydrocarbon Odor	160.6	Time: 0825
5	14	M	29 50		35	Silty SAND and Sandy SILT (SM/ML): Very Dense/Hard, Brown, 50% Silt, 50% Very Fine Sand, Hydrocarbon Odor	170.4	Time: 0830 Sample PL-B1-30'
6	18	M	20		40	Silty SAND (SM): Very Dense, Brown, 25% Silt, 75% Very Fine Sand, Hydrocarbon Odor	111.4	Time: 0835
							136.0	Time: 0840 Sample PL-B1-40'

### WATER LEVEL OBSERVATIONS

While Drilling    ft. Upon Completion of Drilling    ft.  
Time After Drilling \_\_\_\_\_  
Depth to Water \_\_\_\_\_  
Depth to Cave in \_\_\_\_\_

The stratification lines represent the approximate boundary between soil types  
and the transition may be gradual.

### GENERAL NOTES

Start	8/15/97	End	8/15/97
Driller	Cascade	Chief	AWN
Logger	AWN	Editor	FS
Drill Method	4 1/4" I.D. HSA		

Co31meden/MCDON ID: CANOLINE

**MONTGOMERY  
WATSON**



## LOG OF TEST BORING

Project The Boeing Company  
C-6 Facility  
Location Los Angeles, CA

Boring No. PL-B1  
Surface Elevation 39.39 ft. MSL  
Job No. 1206035.01090010  
Sheet 2 of 2

250 N. Madison Ave., P.O. Box 7009, Pasadena, CA 91109, TEL. (818) 796-9141

No.	M oist ure (in.)	Moist	SAMPLE		VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES	
			N	Depth		PID	Remarks
7	18	M	24 34 23 24 29	45	Clayey SILT (ML): Hard, Brown, 75% Silt, 5% Fine Sand, 20% Clay with Low Plasticity, Hydrocarbon Odor  SILT (ML): Hard, Gray, 100% Silt, Slight Hydrocarbon Odor  Grades with Some Clay (15%)	59.0	Time: 0845
8	18	M	16 20 24	50	Clayey SILT (ML): Hard, Gray-Brown, 80% Silt, 15% Clay with Moderate Plasticity, 5% Fine Sand, No Odor	3.3	Time: 0850 Sample PL-B1-50'
End of Boring at 50.0 ft  Groundwater Not Encountered							
				55 60 65 70 75 80			

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## **Appendix C**



**MONTGOMERY WATSON**



**ORANGE COAST ANALYTICAL, INC.**  
3002 Dow, Suite 532  
**Analysis Request and**  
**Chain of Custody Record**

30002 Dow, Suite 532  
Tustin, CA 92680  
(714) 832-0064, Fax

## **Analysis Request and Chain of Custody Record**

### **Chain of Custody Record**

30002 Dow, Suite 532  
Tustin, CA 92680  
(714) 832-0064, Fax (714) 832-0067

**24 hr TAT on Soil TRPH only -  
Standard TAT otherwise**

## CUSTOMER INFORMATION

CUSTOMER INFORMATION		PROJECT INFORMATION		ANALYSIS/METHOD	REQUISITED BY:	Date/Time:	Received By:	Date/Time:	Method of Shipment:	Reporting Format: (check)	
COMPANY:	Montgomery Watson	PROJECT NAME:	Mc Donnell Douglas							NORMAL	S.D. HMMD
SEND REPORT TO:	Fred Strawss	NUMBER:	1206035.01090010	ADDRESS:	250 N. Madison Ave.	LOCATION:	C-6 Facility	DATE:	8/15/97	8/15/97	8/15/97
	Pasadena, CA 91101	ADDRESS:	19503 S. Normandie Ave.	PHONE:	818-568-6582 FAX: 818-796-5741	SAMPLED BY:	Awn/IV/CW	TIME:	15:15	8/15/97	8/15/97
SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	SIZE	PRES.				
PL-B1-20'	2	8/15/97	0820	SOIL	2" X 6"	ICE	X	X	X	X	X
PL-B1-30'	2		0830		SS SLEEVE		X	X	X	X	X
PL-B1-40'	2		0840				X	X	X	X	X
PL-B1-50'	2		0850				X	X	X	X	X
Rinsate Blank	7		1050	WATER	1/2 VOLS	None	X	X	X	X	X
Equipment Blank	7		1145				X	X	X	X	X
Trip Blank	2		—		2 VOLS	HCl	X				
Total No. of Samples:	7	Date/Time:		Received By:		Date/Time:		Method of Shipment:	1 cooler via Orange Coast Courier	Reporting Format: (check)	
Relinquished By:		Date/Time:		Received By:		Date/Time:		Received For Lab By:	Date/Time:	NORMAL	S.D. HMMD
Relinquished By:	Alan J. Vlachos	8/15/97 15:15		Received By:		Date/Time:		Received For Lab By:	Date/Time:	RWQCB	OTHER
Relinquished By:		Date/Time:		Received By:		Date/Time:		Received For Lab By:	Date/Time:	Sample Integrity: (check) intact _____	on ice _____

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pickup samples.



# ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067  
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

**Client Project ID:** McDonnell Douglas  
**Client Project #:** 1206035.01090010

**Sample Description:** Soil, PL-B1-20'

**Sampled:** 08/15/97

**Received:** 08/15/97

**Analyzed:** 08/20/97

**Reported:** 08/22/97

**Laboratory Sample Number:** 97080226  
**Laboratory Reference #:** MWI 9457

## CCR - METALS

<b>Analyte</b>	<b>EPA Method</b>	<b>STLC Limits mg/l</b>	<b>TTLC Limits mg/kg</b>	<b>Detection Limit mg/kg</b>	<b>Analysis Result mg/kg</b>
Antimony	6010	15	500	5.0	N.D.
Arsenic	6010	5.0	500	1.0	N.D.
Barium	6010	100	10000	0.1	140 <---
Beryllium	6010	0.75	75	0.1	N.D.
Cadmium	6010	1.0	100	0.1	N.D.
Chromium (VI)	7196	5.0	500	0.5	N.D.
Chromium Total	6010	560	2500	0.05	31 <---
Cobalt	6010	80	8000	0.5	7.3 <---
Copper	6010	25	2500	0.1	15 <---
Lead	6010	5.0	1000	1.0	N.D.
Mercury	7471	0.2	20	0.01	N.D.
Molybdenum	6010	350	3500	0.5	N.D.
Nickel	6010	20	2000	0.5	13 <---
Selenium	6010	1.0	100	1.0	N.D.
Silver	6010	5.0	500	0.1	N.D.
Thallium	6010	7.0	700	5.0	N.D.
Vanadium	6010	24	2400	0.5	33 <---
Zinc	6010	250	5000	0.1	45 <---

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Analytes reported as N.D. were not present above the stated limit of detection.

ORANGE COAST ANALYTICAL

*Mark Noorani*  
Mark Noorani  
Laboratory Director



# ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067  
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

**Client Project ID:** McDonnell Douglas  
**Client Project #:** 1206035.01090010

**Sample Description:** Soil, PL-B1-30'

**Sampled:** 08/15/97

**Received:** 08/15/97

**Analyzed:** 08/20/97

**Reported:** 08/22/97

**Laboratory Sample Number:** 97080227  
**Laboratory Reference #:** MWI 9457

## CCR - METALS

<b>Analyte</b>	<b>EPA Method</b>	<b>STLC Limits mg/l</b>	<b>TTLC Limits mg/kg</b>	<b>Detection Limit mg/kg</b>	<b>Analysis Result mg/kg</b>	
Antimony	6010	15	500	5.0	N.D.	
Arsenic	6010	5.0	500	1.0	N.D.	
Barium	6010	100	10000	0.1	120	<---
Beryllium	6010	0.75	75	0.1	N.D.	
Cadmium	6010	1.0	100	0.1	N.D.	
Chromium (VI)	7196	5.0	500	0.5	N.D.	
Chromium Total	6010	560	2500	0.05	33	<---
Cobalt	6010	80	8000	0.5	5.4	<---
Copper	6010	25	2500	0.1	22	<---
Lead	6010	5.0	1000	1.0	N.D.	
Mercury	7471	0.2	20	0.01	N.D.	
Molybdenum	6010	350	3500	0.5	N.D.	
Nickel	6010	20	2000	0.5	16	<---
Selenium	6010	1.0	100	1.0	N.D.	
Silver	6010	5.0	500	0.1	N.D.	
Thallium	6010	7.0	700	5.0	N.D.	
Vanadium	6010	24	2400	0.5	40	<---
Zinc	6010	250	5000	0.1	59	<---

---

Analytes reported as N.D. were not present above the stated limit of detection.

ORANGE COAST ANALYTICAL

Mark Noorani  
Mark Noorani  
Laboratory Director



# ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067  
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

**Client Project ID:** McDonnell Douglas  
**Client Project #:** 1206035.01090010

**Sample Description:** Soil, PL-B1-40'

**Sampled:** 08/15/97

**Received:** 08/15/97

**Laboratory Sample Number:** 97080228

**Analyzed:** 08/20/97

**Laboratory Reference #:** MWI 9457

**Reported:** 08/22/97

## CCR - METALS

<b>Analyte</b>	<b>EPA Method</b>	<b>STLC Limits mg/l</b>	<b>TTLC Limits mg/kg</b>	<b>Detection Limit mg/kg</b>	<b>Analysis Result mg/kg</b>	
Antimony	6010	15	500	5.0	N.D.	
Arsenic	6010	5.0	500	1.0	N.D.	
Barium	6010	100	10000	0.1	160	<---
Beryllium	6010	0.75	75	0.1	N.D.	
Cadmium	6010	1.0	100	0.1	N.D.	
Chromium (VI)	7196	5.0	500	0.5	N.D.	
Chromium Total	6010	560	2500	0.05	37	<---
Cobalt	6010	80	8000	0.5	8.5	<---
Copper	6010	25	2500	0.1	23	<---
Lead	6010	5.0	1000	1.0	N.D.	
Mercury	7471	0.2	20	0.01	N.D.	
Molybdenum	6010	350	3500	0.5	N.D.	
Nickel	6010	20	2000	0.5	17	<---
Selenium	6010	1.0	100	1.0	N.D.	
Silver	6010	5.0	500	0.1	N.D.	
Thallium	6010	7.0	700	5.0	N.D.	
Vanadium	6010	24	2400	0.5	44	<---
Zinc	6010	250	5000	0.1	62	<---

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Analyses reported as N.D. were not present above the stated limit of detection.

ORANGE COAST ANALYTICAL

Mark Noorani  
Mark Noorani  
Laboratory Director



# ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067  
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

**Client Project ID:** McDonnell Douglas  
**Client Project #:** 1206035.01090010

**Sample Description:** Soil, PL-B1-50'

**Sampled:** 08/15/97

**Received:** 08/15/97

**Laboratory Sample Number:** 97080229

**Analyzed:** 08/20/97

**Laboratory Reference #:** MWI 9457

**Reported:** 08/22/97

## CCR - METALS

<b>Analyte</b>	<b>EPA Method</b>	<b>STLC Limits mg/l</b>	<b>TTLC Limits mg/kg</b>	<b>Detection Limit mg/kg</b>	<b>Analysis Result mg/kg</b>	
Antimony	6010	15	500	5.0	N.D.	
Arsenic	6010	5.0	500	1.0	N.D.	
Barium	6010	100	10000	0.1	120	<---
Beryllium	6010	0.75	75	0.1	N.D.	
Cadmium	6010	1.0	100	0.1	N.D.	
Chromium (VI)	7196	5.0	500	0.5	N.D.	
Chromium Total	6010	560	2500	0.05	36	<---
Cobalt	6010	80	8000	0.5	8.5	<---
Copper	6010	25	2500	0.1	28	<---
Lead	6010	5.0	1000	1.0	N.D.	
Mercury	7471	0.2	20	0.01	N.D.	
Molybdenum	6010	350	3500	0.5	N.D.	
Nickel	6010	20	2000	0.5	18	<---
Selenium	6010	1.0	100	1.0	N.D.	
Silver	6010	5.0	500	0.1	N.D.	
Thallium	6010	7.0	700	5.0	N.D.	
Vanadium	6010	24	2400	0.5	45	<---
Zinc	6010	250	5000	0.1	57	<---

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Analytes reported as N.D. were not present above the stated limit of detection.

ORANGE COAST ANALYTICAL

Mark Noorani  
Laboratory Director



# ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067  
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

**Client Project ID:** McDonnell Douglas  
**Client Project #:** 1206035.01090010

**Sample Description:** Soil, PL-B1-20'  
**Laboratory Sample Number:** 97080226  
**Laboratory Reference #:** MWI 9457

**Sampled:** 08/15/97  
**Received:** 08/15/97  
**Analyzed:** 08/21/97  
**Reported:** 08/22/97

## VOLATILE ORGANICS BY GC/MS (EPA 8260)

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
Benzene	71-43-2	1000	N.D.
Bromodichloromethane	75-27-4	1000	N.D.
Bromoform	75-25-2	1000	N.D.
Bromomethane	74-83-9	1000	N.D.
Carbon Disulfide	75-15-0	2000	N.D.
Carbon tetrachloride	56-23-5	1000	N.D.
Chlorobenzene	108-90-7	1000	N.D.
Chlorodibromomethane	124-48-1	1000	N.D.
Chloroethane	75-00-3	1000	N.D.
2-Chloroethyl vinyl ether	110-75-8	2000	N.D.
Chloroform	67-66-3	1000	N.D.
Chloromethane	74-87-3	1000	N.D.
1,1-Dichloroethane	75-34-3	1000	N.D.
1,2-Dichloroethane	107-06-2	1000	N.D.
1,1-Dichloroethene	75-35-4	1000	N.D.
Trans 1,2-Dichloroethene	156-60-5	1000	N.D.
1,2-Dichloropropane	78-87-5	1000	N.D.
cis-1,3-Dichloropropene	10061-01-5	1000	N.D.
trans-1,3-Dichloropropene	10061-02-6	1000	N.D.
Ethylbenzene	100-41-4	1000	5,000 <----
Methylene chloride	75-09-2	2000	N.D.
Styrene	100-42-5	1000	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	1000	N.D.
Tetrachloroethene	127-18-4	1000	N.D.
Toluene	108-88-3	1000	N.D.
1,1,1-Trichloroethane	71-55-6	1000	N.D.
1,1,2-Trichloroethane	79-00-5	1000	N.D.
Trichloroethene	79-01-6	1000	N.D.
Trichlorofluoromethane	75-69-4	2000	N.D.
Vinyl acetate	108-05-4	2000	N.D.
Vinyl chloride	75-01-4	1000	N.D.
Total Xylenes	1330-20-7	1000	12,000 <----
Dichlorodifluoromethane	75-71-8	1000	N.D.
cis-1,2-Dichloroethene	156-59-2	1000	N.D.
2,2-Dichloropropane	594-20-7	1000	N.D.
Bromochloromethane	74-97-5	1000	N.D.
1,1-Dichloropropene	563-58-6	1000	N.D.
Dibromomethane	74-95-3	1000	N.D.
1,2-Dibromoethane	106-93-4	1000	N.D.



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## VOLATILE ORGANICS BY GC/MS (EPA 8260) (continued)

Sample Description: Soil, PL-B1-20'

Laboratory Sample #: 97080226

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
1,3-Dichloropropane	142-28-9	1000	N.D.
Isopropylbenzene	98-82-8	1000	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	1000	N.D.
1,2,3-Trichloropropane	96-18-4	1000	N.D.
Bromobenzene	108-86-1	1000	N.D.
n-Propylbenzene	103-65-1	1000	2,500 <----
2-Chlorotoluene	95-49-8	1000	N.D.
1,3,5-Trimethylbenzene	108-67-8	1000	15,000 <----
4-Chlorotoluene	106-43-4	1000	N.D.
tert-Butylbenzene	98-06-6	1000	N.D.
1,2,4-Trimethylbenzene	95-63-6	1000	45,000 <----
sec-Butylbenzene	135-98-8	1000	N.D.
4-Isopropyltoluene	99-87-6	1000	N.D.
1,3-Dichlorobenzene	541-73-1	1000	N.D.
1,4-Dichlorobenzene	106-46-7	1000	N.D.
n-Butylbenzene	104-51-8	1000	3,100 <----
1,2-Dichlorobenzene	95-50-1	1000	N.D.
1,2-Dibromo-3-CPA	96-12-8	2000	N.D.
1,2,4-Trichlorobenzene	120-82-1	1000	N.D.
Hexachlorobutadiene	87-68-3	1000	N.D.
Naphthalene	91-20-3	1000	120,000 <----
1,2,3-Trichlorobenzene	87-61-6	1000	N.D.

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Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical

Mark Noorani  
Mark Noorani  
Laboratory Director

Surrogate Recoveries %

Dibromofluoromethane	101
Toluene-d8	105
4-Bromofluorobenzene	101



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## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

Client Project ID: McDonnell Douglas  
Client Project #: 1206035.01090010

Sample Description: Soil, PL-B1-30'  
Laboratory Sample Number: 97080227  
Laboratory Reference #: MWI 9457

Sampled: 08/15/97  
Received: 08/15/97  
Analyzed: 08/21/97  
Reported: 08/22/97

## VOLATILE ORGANICS BY GC/MS (EPA 8260)

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
Benzene	71-43-2	1000	N.D.
Bromodichloromethane	75-27-4	1000	N.D.
Bromoform	75-25-2	1000	N.D.
Bromomethane	74-83-9	1000	N.D.
Carbon Disulfide	75-15-0	2000	N.D.
Carbon tetrachloride	56-23-5	1000	N.D.
Chlorobenzene	108-90-7	1000	N.D.
Chlorodibromomethane	124-48-1	1000	N.D.
Chloroethane	75-00-3	1000	N.D.
2-Chloroethyl vinyl ether	110-75-8	2000	N.D.
Chloroform	67-66-3	1000	N.D.
Chloromethane	74-87-3	1000	N.D.
1,1-Dichloroethane	75-34-3	1000	N.D.
1,2-Dichloroethane	107-06-2	1000	N.D.
1,1-Dichloroethene	75-35-4	1000	N.D.
Trans 1,2-Dichloroethene	156-60-5	1000	N.D.
1,2-Dichloropropane	78-87-5	1000	N.D.
cis-1,3-Dichloropropene	10061-01-5	1000	N.D.
trans-1,3-Dichloropropene	10061-02-6	1000	N.D.
Ethylbenzene	100-41-4	1000	2,000 <----
Methylene chloride	75-09-2	2000	N.D.
Styrene	100-42-5	1000	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	1000	N.D.
Tetrachloroethene	127-18-4	1000	N.D.
Toluene	108-88-3	1000	N.D.
1,1,1-Trichloroethane	71-55-6	1000	N.D.
1,1,2-Trichloroethane	79-00-5	1000	N.D.
Trichloroethene	79-01-6	1000	N.D.
Trichlorofluoromethane	75-69-4	2000	N.D.
Vinyl acetate	108-05-4	2000	N.D.
Vinyl chloride	75-01-4	1000	N.D.
Total Xylenes	1330-20-7	1000	28,000 <----
Dichlorodifluoromethane	75-71-8	1000	N.D.
cis-1,2-Dichloroethene	156-59-2	1000	N.D.
2,2-Dichloropropane	594-20-7	1000	N.D.
Bromochloromethane	74-97-5	1000	N.D.
1,1-Dichloropropene	563-58-6	1000	N.D.
Dibromomethane	74-95-3	1000	N.D.
1,2-Dibromoethane	106-93-4	1000	N.D.



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## VOLATILE ORGANICS BY GC/MS (EPA 8260) (continued)

Sample Description: Soil, PL-B1-30'

Laboratory Sample #: 97080227

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
1,3-Dichloropropane	142-28-9	1000	N.D.
Isopropylbenzene	98-82-8	1000	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	1000	N.D.
1,2,3-Trichloropropane	96-18-4	1000	N.D.
Bromobenzene	108-86-1	1000	N.D.
n-Propylbenzene	103-65-1	1000	1,400 <----
2-Chlorotoluene	95-49-8	1000	N.D.
1,3,5-Trimethylbenzene	108-67-8	1000	14,000 <----
4-Chlorotoluene	106-43-4	1000	N.D.
tert-Butylbenzene	98-06-6	1000	N.D.
1,2,4-Trimethylbenzene	95-63-6	1000	42,000 <----
sec-Butylbenzene	135-98-8	1000	N.D.
4-Isopropyltoluene	99-87-6	1000	N.D.
1,3-Dichlorobenzene	541-73-1	1000	N.D.
1,4-Dichlorobenzene	106-46-7	1000	N.D.
n-Butylbenzene	104-51-8	1000	2,500 <----
1,2-Dichlorobenzene	95-50-1	1000	N.D.
1,2-Dibromo-3-CPA	96-12-8	2000	N.D.
1,2,4-Trichlorobenzene	120-82-1	1000	N.D.
Hexachlorobutadiene	87-68-3	1000	N.D.
Naphthalene	91-20-3	1000	110,000 <----
1,2,3-Trichlorobenzene	87-61-6	1000	N.D.

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Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical

Mark Noorani  
Mark Noorani  
Laboratory Director

Surrogate Recoveries %

Dibromofluoromethane	103
Toluene-d8	105
4-Bromofluorobenzene	108



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3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067  
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

Client Project ID: McDonnell Douglas  
Client Project #: 1206035.01090010

Sample Description: Soil, PL-B1-40'  
Laboratory Sample Number: 97080228  
Laboratory Reference #: MWI 9457

Sampled: 08/15/97  
Received: 08/15/97  
Analyzed: 08/21/97  
Reported: 08/22/97

## VOLATILE ORGANICS BY GC/MS (EPA 8260)

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
Benzene	71-43-2	250	N.D.
Bromodichloromethane	75-27-4	250	N.D.
Bromoform	75-25-2	250	N.D.
Bromomethane	74-83-9	250	N.D.
Carbon Disulfide	75-15-0	500	N.D.
Carbon tetrachloride	56-23-5	250	N.D.
Chlorobenzene	108-90-7	250	N.D.
Chlorodibromomethane	124-48-1	250	N.D.
Chloroethane	75-00-3	250	N.D.
2-Chloroethyl vinyl ether	110-75-8	500	N.D.
Chloroform	67-66-3	250	N.D.
Chloromethane	74-87-3	250	N.D.
1,1-Dichloroethane	75-34-3	250	N.D.
1,2-Dichloroethane	107-06-2	250	N.D.
1,1-Dichloroethene	75-35-4	250	N.D.
Trans 1,2-Dichloroethene	156-60-5	250	N.D.
1,2-Dichloropropane	78-87-5	250	N.D.
cis-1,3-Dichloropropene	10061-01-5	250	N.D.
trans-1,3-Dichloropropene	10061-02-6	250	N.D.
Ethylbenzene	100-41-4	250	1,400 <----
Methylene chloride	75-09-2	500	N.D.
Styrene	100-42-5	250	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	250	N.D.
Tetrachloroethene	127-18-4	250	N.D.
Toluene	108-88-3	250	690 <--
1,1,1-Trichloroethane	71-55-6	250	N.D.
1,1,2-Trichloroethane	79-00-5	250	N.D.
Trichloroethene	79-01-6	250	N.D.
Trichlorofluoromethane	75-69-4	500	N.D.
Vinyl acetate	108-05-4	500	N.D.
Vinyl chloride	75-01-4	250	N.D.
Total Xylenes	1330-20-7	250	12,000 <--
Dichlorodifluoromethane	75-71-8	250	N.D.
cis-1,2,-Dichloroethene	156-59-2	250	N.D.
2,2-Dichloropropane	594-20-7	250	N.D.
Bromochloromethane	74-97-5	250	N.D.
1,1-Dichloropropene	563-58-6	250	N.D.
Dibromomethane	74-95-3	250	N.D.
1,2-Dibromoethane	106-93-4	250	N.D.



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4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## VOLATILE ORGANICS BY GC/MS (EPA 8260) (continued)

Sample Description: Soil, PL-B1-40'

Laboratory Sample #: 97080228

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
1,3-Dichloropropane	142-28-9	250	N.D.
Isopropylbenzene	98-82-8	250	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	250	N.D.
1,2,3-Trichloropropane	96-18-4	250	N.D.
Bromobenzene	108-86-1	250	N.D.
n-Propylbenzene	103-65-1	250	910 <----
2-Chlorotoluene	95-49-8	250	N.D.
1,3,5-Trimethylbenzene	108-67-8	250	5,900 <----
4-Chlorotoluene	106-43-4	250	N.D.
tert-Butylbenzene	98-06-6	250	N.D.
1,2,4-Trimethylbenzene	95-63-6	250	19,000 <----
sec-Butylbenzene	135-98-8	250	N.D.
4-Isopropyltoluene	99-87-6	250	N.D.
1,3-Dichlorobenzene	541-73-1	250	N.D.
1,4-Dichlorobenzene	106-46-7	250	N.D.
n-Butylbenzene	104-51-8	250	1,300 <----
1,2-Dichlorobenzene	95-50-1	250	N.D.
1,2-Dibromo-3-CPA	96-12-8	500	N.D.
1,2,4-Trichlorobenzene	120-82-1	250	N.D.
Hexachlorobutadiene	87-68-3	250	N.D.
Naphthalene	91-20-3	250	36,000 <----
1,2,3-Trichlorobenzene	87-61-6	250	N.D.

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Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical

Mark Noorani  
Mark Noorani  
Laboratory Director

Surrogate Recoveries %

Dibromofluoromethane	102
Toluene-d8	104
4-Bromofluorobenzene	103



## ORANGE COAST ANALYTICAL, INC.

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4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

### Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

**Client Project ID:** McDonnell Douglas  
**Client Project #:** 1206035.01090010

**Sample Description:** Soil, PL-B1-50'  
**Laboratory Sample Number:** 97080229  
**Laboratory Reference #:** MWI 9457

**Sampled:** 08/15/97  
**Received:** 08/15/97  
**Analyzed:** 08/18/97  
**Reported:** 08/22/97

### VOLATILE ORGANICS BY GC/MS (EPA 8260)

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
Benzene	71-43-2	2.5	N.D.
Bromodichloromethane	75-27-4	2.5	N.D.
Bromoform	75-25-2	2.5	N.D.
Bromomethane	74-83-9	2.5	N.D.
Carbon Disulfide	75-15-0	5.0	N.D.
Carbon tetrachloride	56-23-5	2.5	N.D.
Chlorobenzene	108-90-7	2.5	N.D.
Chlorodibromomethane	124-48-1	2.5	N.D.
Chloroethane	75-00-3	2.5	N.D.
2-Chloroethyl vinyl ether	110-75-8	5.0	N.D.
Chloroform	67-66-3	2.5	N.D.
Chloromethane	74-87-3	2.5	N.D.
1,1-Dichloroethane	75-34-3	2.5	N.D.
1,2-Dichloroethane	107-06-2	2.5	N.D.
1,1-Dichloroethene	75-35-4	2.5	N.D.
Trans 1,2-Dichloroethene	156-60-5	2.5	N.D.
1,2-Dichloropropane	78-87-5	2.5	N.D.
cis-1,3-Dichloropropene	10061-01-5	2.5	N.D.
trans-1,3-Dichloropropene	10061-02-6	2.5	N.D.
Ethylbenzene	100-41-4	2.5	N.D.
Methylene chloride	75-09-2	5.0	N.D.
Styrene	100-42-5	2.5	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	2.5	N.D.
Tetrachloroethene	127-18-4	2.5	N.D.
Toluene	108-88-3	2.5	N.D.
1,1,1-Trichloroethane	71-55-6	2.5	N.D.
1,1,2-Trichloroethane	79-00-5	2.5	N.D.
Trichloroethene	79-01-6	2.5	N.D.
Trichlorofluoromethane	75-69-4	5.0	N.D.
Vinyl acetate	108-05-4	5.0	N.D.
Vinyl chloride	75-01-4	2.5	N.D.
Total Xylenes	1330-20-7	2.5	N.D.
Dichlorodifluoromethane	75-71-8	2.5	N.D.
cis-1,2-Dichloroethene	156-59-2	2.5	N.D.
2,2-Dichloropropane	594-20-7	2.5	N.D.
Bromochloromethane	74-97-5	2.5	N.D.
1,1-Dichloropropene	563-58-6	2.5	N.D.
Dibromomethane	74-95-3	2.5	N.D.
1,2-Dibromoethane	106-93-4	2.5	N.D.



## ORANGE COAST ANALYTICAL, INC.

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### VOLATILE ORGANICS BY GC/MS (EPA 8260) (continued)

Sample Description: Soil, PL-B1-50'

Laboratory Sample #: 97080229

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
1,3-Dichloropropane	142-28-9	2.5	N.D.
Isopropylbenzene	98-82-8	2.5	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	2.5	N.D.
1,2,3-Trichloropropane	96-18-4	2.5	N.D.
Bromobenzene	108-86-1	2.5	N.D.
n-Propylbenzene	103-65-1	2.5	N.D.
2-Chlorotoluene	95-49-8	2.5	N.D.
1,3,5-Trimethylbenzene	108-67-8	2.5	N.D.
4-Chlorotoluene	106-43-4	2.5	N.D.
tert-Butylbenzene	98-06-6	2.5	N.D.
1,2,4-Trimethylbenzene	95-63-6	2.5	N.D.
sec-Butylbenzene	135-98-8	2.5	N.D.
4-Isopropyltoluene	99-87-6	2.5	N.D.
1,3-Dichlorobenzene	541-73-1	2.5	N.D.
1,4-Dichlorobenzene	106-46-7	2.5	N.D.
n-Butylbenzene	104-51-8	2.5	N.D.
1,2-Dichlorobenzene	95-50-1	2.5	N.D.
1,2-Dibromo-3-CPA	96-12-8	5.0	N.D.
1,2,4-Trichlorobenzene	120-82-1	2.5	N.D.
Hexachlorobutadiene	87-68-3	2.5	N.D.
Naphthalene	91-20-3	2.5	N.D.
1,2,3-Trichlorobenzene	87-61-6	2.5	N.D.

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Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical

Mark Noorani  
Mark Noorani

Laboratory Director

Surrogate Recoveries %

Dibromofluoromethane	97
Toluene-d8	104
4-Bromofluorobenzene	105



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## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

Client Project ID: McDonnell Douglas  
Client Project #: 1206035.01090010

Sample Description: Soil, PL-B1-20'  
Laboratory Sample Number: 97080226  
Laboratory Reference #: MWI 9457

Sampled: 08/15/97  
Received: 08/15/97  
Analyzed: 08/18/97  
Reported: 08/22/97

## SEMI VOLATILE ORGANICS BY GC/MS (EPA 8270)

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
Acenaphthene	83-32-9	2000	6,500 <---
Acenaphthylene	208-96-8	2000	N.D.
Aniline	62-53-3	2000	N.D.
Anthracene	120-12-7	2000	7,400 <---
Benzoic Acid	65-85-0	10000	N.D.
Benzo (a) anthracene	56-55-3	2000	11,000 <---
Benzo (b) fluoranthene	205-99-2	5000	N.D.
Benzo (k) fluoranthene	207-08-9	5000	N.D.
Benzo (g,h,i)perylene	191-24-2	5000	7,800 <---
Benzo (a) pyrene	50-32-8	5000	13,000 <---
Benzyl alcohol	100-51-6	2000	N.D.
Bis(2-chloroethoxy)methane	111-91-1	2000	N.D.
Bis(2-chloroethyl)ether	111-44-4	2000	N.D.
Bis(2-chloroisopropyl)ether	39638-32-9	2000	N.D.
Bis(2-ethylhexyl)phthalate	117-81-7	2000	2300 <----
4-Bromophenyl phenyl ether	101-55-3	2000	N.D.
Butyl benzyl phthalate	85-68-7	2000	N.D.
4-Chloroaniline	106-47-8	2000	N.D.
2-Chloronaphthalene	91-58-7	2000	N.D.
4-Chloro-3-methylphenol	59-50-7	2000	N.D.
2-Chlorophenol	95-57-8	2000	N.D.
4-Chlorophenyl phenyl ehter	7005-72-3	2000	N.D.
Chrysene	218-0109	2000	22,000 <---
Dibenz(a,h)anthracene	53-70-3	2000	N.D.
Dibenzofuran	132-64-9	2000	N.D.
Di-N-butyl phthalate	84-74-2	5000	N.D.
1,3-Dichlorobenzene	541-73-1	2000	N.D.
1,4-Dichlorobenzene	106-46-7	2000	N.D.
1,2-Dichlorobenzene	95-50-1	2000	N.D.
3,3-Dichlorobenzidine	91-94-1	2000	N.D.
2,4-Dichlorophenol	120-83-2	2000	N.D.
Diethyl phthalate	84-66-2	2000	N.D.
2,4-Dimethylphenol	105-67-9	2000	N.D.
Dimethyl phthalate	131-11-3	2000	N.D.
4,6-Dinitro-2-methylphenol	534-52-1	2000	N.D.
2,4-Dinitrophenol	51-28-5	2000	N.D.
2,4-Dinitrotoluene	121-14-2	5000	N.D.
2,6-Dinitrotoluene	606-20-2	5000	N.D.
Di-N-octyl phthalate	117-84-0	5000	N.D.



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## SEMI-VOLATILE ORGANICS BY GC/MS (EPA 8270) (continued)

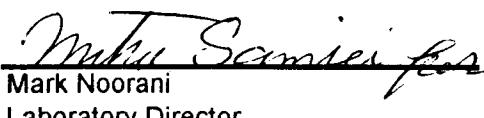
Sample Description: Soil, PL-B1-20'

Laboratory Sample #: 97080226

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
Fluoranthene	206-44-0	2000	5,700 <---
Fluorene	86-73-7	2000	16,000 <---
Hexachlorobenzene	118-74-1	2000	N.D.
Hexachlorobutadiene	87-68-3	2000	N.D.
Hexachlorocyclopentadiene	77-47-4	2000	N.D.
Hexachloroethane	67-72-1	2000	N.D.
Indeno(1,2,3-cd)pyrene	193-39-5	5000	N.D.
Isophorone	78-59-1	2000	N.D.
2-Methylnaphthalene	91-57-6	2000	250,000 <---
2-Methylphenol	95-48-7	2000	N.D.
4-Methylphenol	106-44-5	2000	N.D.
Naphthalene	91-20-3	2000	78,000 <---
2-Nitroaniline	88-74-4	5000	N.D.
3-Nitroaniline	99-09-2	5000	N.D.
4-Nitroaniline	100-01-6	5000	N.D.
Nitrobenzene	98-95-3	2000	N.D.
2-Nitrophenol	88-75-5	2000	N.D.
4-Nitrophenol	100-02-7	2000	N.D.
N-Nitrosodiphenylamine	86-30-6	2000	N.D.
N-Nitroso-di-N-propylamine	621-64-7	2000	N.D.
N-Nitrosodimethylamine	62-75-9	2000	N.D.
Pentachlorophenol	87-86-5	5000	N.D.
Phenanthrene	85-01-8	2000	73,000 <---
Phenol	108-95-2	2000	N.D.
Pyrene	129-00-0	2000	51,000 <----
1,2,4-Trichlorobenzene	120-82-1	2000	N.D.
2,4,5-Trichlorophenol	95-95-4	2000	N.D.
2,4,6-Trichlorophenol	88-06-2	2000	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical

  
Mark Noorani  
Laboratory Director



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## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

Client Project ID: McDonnell Douglas  
Client Project #: 1206035.01090010

Sample Description: Soil, PL-B1-30'  
Laboratory Sample Number: 97080227  
Laboratory Reference #: MWI 9457

Sampled: 08/15/97  
Received: 08/15/97  
Analyzed: 08/18/97  
Reported: 08/22/97

## SEMI VOLATILE ORGANICS BY GC/MS (EPA 8270)

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)	
Acenaphthene	83-32-9	2000	2,700	<---
Acenaphthylene	208-96-8	2000	N.D.	
Aniline	62-53-3	2000	N.D.	
Anthracene	120-12-7	2000	3,200	<---
Benzoic Acid	65-85-0	10000	N.D.	
Benzo (a) anthracene	56-55-3	2000	3,400	<---
Benzo (b) fluoranthene	205-99-2	5000	N.D.	
Benzo (k) fluoranthene	207-08-9	5000	N.D.	
Benzo (g,h,i)perylene	191-24-2	5000	N.D.	
Benzo (a) pyrene	50-32-8	5000	N.D.	
Benzyl alcohol	100-51-6	2000	N.D.	
Bis(2-chloroethoxy)methane	111-91-1	2000	N.D.	
Bis(2-chloroethyl)ether	111-44-4	2000	N.D.	
Bis(2-chloroisopropyl)ether	39638-32-9	2000	N.D.	
Bis(2-ethylhexyl)phthalate	117-81-7	2000	N.D.	
4-Bromophenyl phenyl ether	101-55-3	2000	N.D.	
Butyl benzyl phthalate	85-68-7	2000	N.D.	
4-Chloroaniline	106-47-8	2000	N.D.	
2-Chloronaphthalene	91-58-7	2000	N.D.	
4-Chloro-3-methylphenol	59-50-7	2000	N.D.	
2-Chlorophenol	95-57-8	2000	N.D.	
4-Chlorophenyl phenyl ehter	7005-72-3	2000	N.D.	
Chrysene	218-0109	2000	7,500	<---
Dibenz(a,h)anthracene	53-70-3	2000	N.D.	
Dibenzofuran	132-64-9	2000	N.D.	
Di-N-butyl phthalate	84-74-2	5000	N.D.	
1,3-Dichlorobenzene	541-73-1	2000	N.D.	
1,4-Dichlorobenzene	106-46-7	2000	N.D.	
1,2-Dichlorobenzene	95-50-1	2000	N.D.	
3,3-Dichlorobenzidine	91-94-1	2000	N.D.	
2,4-Dichlorophenol	120-83-2	2000	N.D.	
Diethyl phthalate	84-66-2	2000	N.D.	
2,4-Dimethylphenol	105-67-9	2000	N.D.	
Dimethyl phthalate	131-11-3	2000	N.D.	
4,6-Dinitro-2-methylphenol	534-52-1	2000	N.D.	
2,4-Dinitrophenol	51-28-5	2000	N.D.	
2,4-Dinitrotoluene	121-14-2	5000	N.D.	
2,6-Dinitrotoluene	606-20-2	5000	N.D.	
Di-N-octyl phthalate	117-84-0	5000	N.D.	



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## SEMI-VOLATILE ORGANICS BY GC/MS (EPA 8270) (continued)

Sample Description: Soil, PL-B1-30'  
Laboratory Sample #: 97080227

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
Fluoranthene	206-44-0	2000	N.D.
Fluorene	86-73-7	2000	6,300 <---
Hexachlorobenzene	118-74-1	2000	N.D.
Hexachlorobutadiene	87-68-3	2000	N.D.
Hexachlorocyclopentadiene	77-47-4	2000	N.D.
Hexachloroethane	67-72-1	2000	N.D.
Indeno(1,2,3-cd)pyrene	193-39-5	5000	N.D.
Isophorone	78-59-1	2000	N.D.
2-Methylnaphthalene	91-57-6	2000	100,000 <---
2-Methylphenol	95-48-7	2000	N.D.
4-Methylphenol	106-44-5	2000	N.D.
Naphthalene	91-20-3	2000	27,000 <---
2-Nitroaniline	88-74-4	5000	N.D.
3-Nitroaniline	99-09-2	5000	N.D.
4-Nitroaniline	100-01-6	5000	N.D.
Nitrobenzene	98-95-3	2000	N.D.
2-Nitrophenol	88-75-5	2000	N.D.
4-Nitrophenol	100-02-7	2000	N.D.
N-Nitrosodiphenylamine	86-30-6	2000	N.D.
N-Nitroso-di-N-propylamine	621-64-7	2000	N.D.
N-Nitrosodimethylamine	62-75-9	2000	N.D.
Pentachlorophenol	87-86-5	5000	N.D.
Phenanthrene	85-01-8	2000	28,000 <---
Phenol	108-95-2	2000	N.D.
Pyrene	129-00-0	2000	18,000 <----
1,2,4-Trichlorobenzene	120-82-1	2000	N.D.
2,4,5-Trichlorophenol	95-95-4	2000	N.D.
2,4,6-Trichlorophenol	88-06-2	2000	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical

Mark Noorani  
Laboratory Director



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## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

Client Project ID: McDonnell Douglas  
Client Project #: 1206035.01090010

Sample Description: Soil, PL-B1-40'  
Laboratory Sample Number: 97080228  
Laboratory Reference #: MWI 9457

Sampled: 08/15/97  
Received: 08/15/97  
Analyzed: 08/18/97  
Reported: 08/22/97

## SEMI VOLATILE ORGANICS BY GC/MS (EPA 8270)

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
Acenaphthene	83-32-9	2000	N.D.
Acenaphthylene	208-96-8	2000	N.D.
Aniline	62-53-3	2000	N.D.
Anthracene	120-12-7	2000	3,300 <---
Benzoic Acid	65-85-0	10000	N.D.
Benzo (a) anthracene	56-55-3	2000	4,200 <---
Benzo (b) fluoranthene	205-99-2	5000	N.D.
Benzo (k) fluoranthene	207-08-9	5000	N.D.
Benzo (g,h,i)perylene	191-24-2	5000	N.D.
Benzo (a) pyrene	50-32-8	5000	N.D.
Benzyl alcohol	100-51-6	2000	N.D.
Bis(2-chloroethoxy)methane	111-91-1	2000	N.D.
Bis(2-chloroethyl)ether	111-44-4	2000	N.D.
Bis(2-chloroisopropyl)ether	39638-32-9	2000	N.D.
Bis(2-ethylhexyl)phthalate	117-81-7	2000	N.D.
4-Bromophenyl phenyl ether	101-55-3	2000	N.D.
Butyl benzyl phthalate	85-68-7	2000	N.D.
4-Chloroaniline	106-47-8	2000	N.D.
2-Chloronaphthalene	91-58-7	2000	N.D.
4-Chloro-3-methylphenol	59-50-7	2000	N.D.
2-Chlorophenol	95-57-8	2000	N.D.
4-Chlorophenyl phenyl ehter	7005-72-3	2000	N.D.
Chrysene	218-0109	2000	7,500 <---
Dibenz(a,h)anthracene	53-70-3	2000	N.D.
Dibenzofuran	132-64-9	2000	N.D.
Di-N-butyl phthalate	84-74-2	5000	N.D.
1,3-Dichlorobenzene	541-73-1	2000	N.D.
1,4-Dichlorobenzene	106-46-7	2000	N.D.
1,2-Dichlorobenzene	95-50-1	2000	N.D.
3,3-Dichlorobenzidine	91-94-1	2000	N.D.
2,4-Dichlorophenol	120-83-2	2000	N.D.
Diethyl phthalate	84-66-2	2000	N.D.
2,4-Dimethylphenol	105-67-9	2000	N.D.
Dimethyl phthalate	131-11-3	2000	N.D.
4,6-Dinitro-2-methylphenol	534-52-1	2000	N.D.
2,4-Dinitrophenol	51-28-5	2000	N.D.
2,4-Dinitrotoluene	121-14-2	5000	N.D.
2,6-Dinitrotoluene	606-20-2	5000	N.D.
Di-N-octyl phthalate	117-84-0	5000	N.D.



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## SEMI-VOLATILE ORGANICS BY GC/MS (EPA 8270)

(continued)

Sample Description: Soil, PL-B1-40'

Laboratory Sample #: 97080228

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
Fluoranthene	206-44-0	2000	N.D.
Fluorene	86-73-7	2000	6,400 <---
Hexachlorobenzene	118-74-1	2000	N.D.
Hexachlorobutadiene	87-68-3	2000	N.D.
Hexachlorocyclopentadiene	77-47-4	2000	N.D.
Hexachloroethane	67-72-1	2000	N.D.
Indeno(1,2,3-cd)pyrene	193-39-5	5000	N.D.
Isophorone	78-59-1	2000	N.D.
2-Methylnaphthalene	91-57-6	2000	95,000 <---
2-Methylphenol	95-48-7	2000	N.D.
4-Methylphenol	106-44-5	2000	N.D.
Naphthalene	91-20-3	2000	20,000 <---
2-Nitroaniline	88-74-4	5000	N.D.
3-Nitroaniline	99-09-2	5000	N.D.
4-Nitroaniline	100-01-6	5000	N.D.
Nitrobenzene	98-95-3	2000	N.D.
2-Nitrophenol	88-75-5	2000	N.D.
4-Nitrophenol	100-02-7	2000	N.D.
N-Nitrosodiphenylamine	86-30-6	2000	N.D.
N-Nitroso-di-N-propylamine	621-64-7	2000	N.D.
N-Nitrosodimethylamine	62-75-9	2000	N.D.
Pentachlorophenol	87-86-5	5000	N.D.
Phenanthrene	85-01-8	2000	29,000 <---
Phenol	108-95-2	2000	N.D.
Pyrene	129-00-0	2000	20,000 <----
1,2,4-Trichlorobenzene	120-82-1	2000	N.D.
2,4,5-Trichlorophenol	95-95-4	2000	N.D.
2,4,6-Trichlorophenol	88-06-2	2000	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical

*Mark Noorani*  
Mark Noorani  
Laboratory Director



# ORANGE COAST ANALYTICAL, INC.

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## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

Client Project ID: McDonnell Douglas  
Client Project #: 1206035.01090010

Sample Description: Soil, PL-B1-50'  
Laboratory Sample Number: 97080229  
Laboratory Reference #: MWI 9457

Sampled: 08/15/97  
Received: 08/15/97  
Analyzed: 08/18/97  
Reported: 08/22/97

## SEMI VOLATILE ORGANICS BY GC/MS (EPA 8270)

ANALYTE	CAS NUMBER	DETECTION Limit (ug/kg)	SAMPLE RESULTS (ug/kg)
Acenaphthene	83-32-9	100	N.D.
Acenaphthylene	208-96-8	100	N.D.
Aniline	62-53-3	100	N.D.
Anthracene	120-12-7	100	N.D.
Benzoic Acid	65-85-0	500	N.D.
Benzo (a) anthracene	56-55-3	100	N.D.
Benzo (b) fluoranthene	205-99-2	250	N.D.
Benzo (k) fluoranthene	207-08-9	250	N.D.
Benzo (g,h,i)perylene	191-24-2	250	N.D.
Benzo (a) pyrene	50-32-8	250	N.D.
Benzyl alcohol	100-51-6	100	N.D.
Bis(2-chloroethoxy)methane	111-91-1	100	N.D.
Bis(2-chloroethyl)ether	111-44-4	100	N.D.
Bis(2-chloroisopropyl)ether	39638-32-9	100	N.D.
Bis(2-ethylhexyl)phthalate	117-81-7	100	N.D.
4-Bromophenyl phenyl ether	101-55-3	100	N.D.
Butyl benzyl phthalate	85-68-7	100	N.D.
4-Chloroaniline	106-47-8	100	N.D.
2-Chloronaphthalene	91-58-7	100	N.D.
4-Chloro-3-methylphenol	59-50-7	100	N.D.
2-Chlorophenol	95-57-8	100	N.D.
4-Chlorophenyl phenyl ehter	7005-72-3	100	N.D.
Chrysene	218-0109	100	N.D.
Dibenz(a,h)anthracene	53-70-3	100	N.D.
Dibenzofuran	132-64-9	100	N.D.
Di-N-butyl phthalate	84-74-2	250	N.D.
1,3-Dichlorobenzene	541-73-1	100	N.D.
1,4-Dichlorobenzene	106-46-7	100	N.D.
1,2-Dichlorobenzene	95-50-1	100	N.D.
3,3-Dichlorobenzidine	91-94-1	100	N.D.
2,4-Dichlorophenol	120-83-2	100	N.D.
Diethyl phthalate	84-66-2	100	N.D.
2,4-Dimethylphenol	105-67-9	100	N.D.
Dimethyl phthalate	131-11-3	100	N.D.
4,6-Dinitro-2-methylphenol	534-52-1	100	N.D.
2,4-Dinitrophenol	51-28-5	100	N.D.
2,4-Dinitrotoluene	121-14-2	250	N.D.
2,6-Dinitrotoluene	606-20-2	250	N.D.
Di-N-octyl phthalate	117-84-0	250	N.D.



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4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## SEMI-VOLATILE ORGANICS BY GC/MS (EPA 8270) (continued)

Sample Description: Soil, PL-B1-50'

Laboratory Sample #: 97080229

<b>ANALYTE</b>	<b>CAS NUMBER</b>	<b>DETECTION Limit (ug/kg)</b>	<b>SAMPLE RESULTS (ug/kg)</b>
Fluoranthene	206-44-0	100	N.D.
Fluorene	86-73-7	100	N.D.
Hexachlorobenzene	118-74-1	100	N.D.
Hexachlorobutadiene	87-68-3	100	N.D.
Hexachlorocyclopentadiene	77-47-4	100	N.D.
Hexachloroethane	67-72-1	100	N.D.
Indeno(1,2,3-cd)pyrene	193-39-5	250	N.D.
Isophorone	78-59-1	100	N.D.
2-Methylnaphthalene	91-57-6	100	N.D.
2-Methylphenol	95-48-7	100	N.D.
4-Methylphenol	106-44-5	100	N.D.
Naphthalene	91-20-3	100	N.D.
2-Nitroaniline	88-74-4	250	N.D.
3-Nitroaniline	99-09-2	250	N.D.
4-Nitroaniline	100-01-6	250	N.D.
Nitrobenzene	98-95-3	100	N.D.
2-Nitrophenol	88-75-5	100	N.D.
4-Nitrophenol	100-02-7	100	N.D.
N-Nitrosodiphenylamine	86-30-6	100	N.D.
N-Nitroso-di-N-propylamine	621-64-7	100	N.D.
N-Nitrosodimethylamine	62-75-9	100	N.D.
Pentachlorophenol	87-86-5	250	N.D.
Phenanthrene	85-01-8	100	N.D.
Phenol	108-95-2	100	N.D.
Pyrene	129-00-0	100	N.D.
1,2,4-Trichlorobenzene	120-82-1	100	N.D.
2,4,5-Trichlorophenol	95-95-4	100	N.D.
2,4,6-Trichlorophenol	88-06-2	100	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical

Mark Noorani  
Mark Noorani  
Laboratory Director



# ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067  
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

**Client Project ID:** McDonnell Douglas  
**Client Project #:** 1206035.01090010

**Analysis Method:** 418.1

**Sampled:** 08/15/97

**Sample Description:** Water,

**Received:** 08/15/97

**Laboratory Reference #:** MWI 9457

**Analyzed:** 08/21/97

**Reported:** 08/22/97

## TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

<b>Laboratory Sample Number</b>	<b>Client Sample Number</b>	<b>Extractable Hydrocarbons mg/l (ppm)</b>
97080230	Rinsate Blank	N.D.
97080231	Equipment Blank	N.D.

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**Detection Limit:** 0.5

Analyte reported as N.D. was not present above the stated limit of detection.

ORANGE COAST ANALYTICAL

Mark Noorani  
Mark Noorani  
Laboratory Director



# ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067  
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## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

**Client Project ID:** McDonnell Douglas  
**Client Project #:** 1206035.01090010

**Sample Description:** Water, Rinsate Blank

**Laboratory Sample Number:** 97080230  
**Laboratory Reference #:** MWI 9457

**Sampled:** 08/15/97

**Received:** 08/15/97

**Analyzed:** 08/20/97

**Reported:** 08/22/97

## CCR - METALS

<b>Analyte</b>	<b>EPA Method</b>	<b>Detection Limit</b> <i>mg/l</i>	<b>Analysis Result</b> <i>mg/l</i>
Antimony	6010	0.5	N.D.
Arsenic	6010	0.1	N.D.
Barium	6010	0.01	N.D.
Beryllium	6010	0.01	N.D.
Cadmium	6010	0.01	N.D.
Chromium (VI)	7196	0.01	N.D.
Chromium Total	6010	0.01	N.D.
Cobalt	6010	0.05	N.D.
Copper	6010	0.01	N.D.
Lead	6010	0.1	N.D.
Mercury	7471	0.002	N.D.
Molybdenum	6010	0.1	N.D.
Nickel	6010	0.05	N.D.
Selenium	6010	0.1	N.D.
Silver	6010	0.05	N.D.
Thallium	6010	0.5	N.D.
Vanadium	6010	0.1	N.D.
Zinc	6010	0.01	N.D.

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Analytes reported as N.D. were not present above the stated limit of detection.

ORANGE COAST ANALYTICAL

Mark Noorani

Mark Noorani  
Laboratory Director



# ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067  
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

**Client Project ID:** McDonnell Douglas  
**Client Project #:** 1206035.01090010

**Sample Description:** Water, Equip Blank

**Sampled:** 08/15/97

**Received:** 08/15/97

**Analyzed:** 08/20/97

**Reported:** 08/22/97

**Laboratory Sample Number:** 97080231  
**Laboratory Reference #:** MWI 9457

## CCR - METALS

<b>Analyte</b>	<b>EPA Method</b>	<b>Detection Limit</b> <i>mg/l</i>	<b>Analysis Result</b> <i>mg/l</i>
Antimony	6010	0.5	N.D.
Arsenic	6010	0.1	N.D.
Barium	6010	0.01	N.D.
Beryllium	6010	0.01	N.D.
Cadmium	6010	0.01	N.D.
Chromium (VI)	7196	0.01	N.D.
Chromium Total	6010	0.01	N.D.
Cobalt	6010	0.05	N.D.
Copper	6010	0.01	N.D.
Lead	6010	0.1	N.D.
Mercury	7471	0.002	N.D.
Molybdenum	6010	0.1	N.D.
Nickel	6010	0.05	N.D.
Selenium	6010	0.1	N.D.
Silver	6010	0.05	N.D.
Thallium	6010	0.5	N.D.
Vanadium	6010	0.1	N.D.
Zinc	6010	0.01	N.D.

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Analytes reported as N.D. were not present above the stated limit of detection.

ORANGE COAST ANALYTICAL

  
Mark Noorani

Laboratory Director



# ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067  
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

Client Project ID: McDonnell Douglas  
Client Project #: 1206035.01090010

Sample Description: Water, Rinsate Blank  
Laboratory Sample Number: 97080230  
Laboratory Reference #: MWI 9457

Sampled: 08/15/97  
Received: 08/15/97  
Analyzed: 08/18/97  
Reported: 08/22/97

## VOLATILE ORGANICS BY GC/MS (EPA 8260)

ANALYTE	CAS NUMBER	DETECTION Limit (ug/l)	SAMPLE RESULTS (ug/l)
Benzene	71-43-2	0.5	N.D.
Bromodichloromethane	75-27-4	0.5	N.D.
Bromoform	75-25-2	0.5	N.D.
Bromomethane	74-83-9	1.0	N.D.
Carbon Disulfide	75-15-0	0.5	N.D.
Carbon tetrachloride	56-23-5	0.5	N.D.
Chlorobenzene	108-90-7	0.5	N.D.
Chlorodibromomethane	124-48-1	0.5	N.D.
Chloroethane	75-00-3	0.5	N.D.
2-Chloroethyl vinyl ether	110-75-8	0.5	N.D.
Chloroform	67-66-3	0.5	N.D.
Chloromethane	74-87-3	0.5	N.D.
1,1-Dichloroethane	75-34-3	0.5	N.D.
1,2-Dichloroethane	107-06-2	0.5	N.D.
1,1-Dichloroethene	75-35-4	0.5	N.D.
Trans 1,2-Dichloroethene	156-60-5	0.5	N.D.
1,2-Dichloropropane	78-87-5	0.5	N.D.
cis-1,3-Dichloropropene	10061-01-5	0.5	N.D.
trans-1,3-Dichloropropene	10061-02-6	0.5	N.D.
Ethylbenzene	100-41-4	0.5	N.D.
Methylene chloride	75-09-2	2.5	N.D.
Styrene	100-42-5	0.5	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	0.5	N.D.
Tetrachloroethene	127-18-4	0.5	N.D.
Toluene	108-88-3	0.5	N.D.
1,1,1-Trichloroethane	71-55-6	0.5	N.D.
1,1,2-Trichloroethane	79-00-5	0.5	N.D.
Trichloroethene	79-01-6	0.5	N.D.
Trichlorofluoromethane	75-69-4	0.5	N.D.
Vinyl acetate	108-05-4	1.0	N.D.
Vinyl chloride	75-01-4	0.5	N.D.
Total Xylenes	1330-20-7	1.0	N.D.
Dichlorodifluoromethane	75-71-8	0.5	N.D.
cis-1,2-Dichloroethene	156-59-2	0.5	N.D.
2,2-Dichloropropane	594-20-7	0.5	N.D.
Bromochloromethane	74-97-5	0.5	N.D.
1,1-Dichloropropene	563-58-6	0.5	N.D.
Dibromomethane	74-95-3	0.5	N.D.
1,2-Dibromoethane	106-93-4	0.5	N.D.



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## VOLATILE ORGANICS BY GC/MS (EPA 8260) (continued)

Sample Description: Water, Rinsate Blank

Laboratory Sample #: 97080230

ANALYTE	CAS NUMBER	DETECTION Limit (ug/l)	SAMPLE RESULTS (ug/l)
1,3-Dichloropropane	142-28-9	0.5	N.D.
Isopropylbenzene	98-82-8	0.5	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	0.5	N.D.
1,2,3-Trichloropropane	96-18-4	0.5	N.D.
Bromobenzene	108-86-1	0.5	N.D.
n-Propylbenzene	103-65-1	0.5	N.D.
2-Chlorotoluene	95-49-8	0.5	N.D.
1,3,5-Trimethylbenzene	108-67-8	0.5	N.D.
4-Chlorotoluene	106-43-4	0.5	N.D.
tert-Butylbenzene	98-06-6	0.5	N.D.
1,2,4-Trimethylbenzene	95-63-6	0.5	N.D.
sec-Butylbenzene	135-98-8	0.5	N.D.
4-Isopropyltoluene	99-87-6	0.5	N.D.
1,3-Dichlorobenzene	541-73-1	0.5	N.D.
1,4-Dichlorobenzene	106-46-7	0.5	N.D.
n-Butylbenzene	104-51-8	0.5	N.D.
1,2-Dichlorobenzene	95-50-1	0.5	N.D.
1-2-Dibromo-3-CPA	96-12-8	1.0	N.D.
1,2,4-Trichlorobenzene	120-82-1	0.5	N.D.
Hexachlorobutadiene	87-68-3	0.5	N.D.
Naphthalene	91-20-3	0.5	N.D.
1,2,3-Trichlorobenzene	87-61-6	0.5	N.D.

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Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical

Mark Noorani  
Laboratory Director

Surrogate Recoveries %

Dibromofluoromethane	101
Toluene-d8	105
4-Bromofluorobenzene	102



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## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

**Client Project ID:** McDonnell Douglas  
**Client Project #:** 1206035.01090010

**Sample Description:** Water, Equipment Blank  
**Laboratory Sample Number:** 97080231  
**Laboratory Reference #:** MWI 9457

**Sampled:** 08/15/97  
**Received:** 08/15/97  
**Analyzed:** 08/18/97  
**Reported:** 08/22/97

## VOLATILE ORGANICS BY GC/MS (EPA 8260)

ANALYTE	CAS NUMBER	DETECTION Limit (ug/l)	SAMPLE RESULTS (ug/l)
Benzene	71-43-2	0.5	N.D.
Bromodichloromethane	75-27-4	0.5	N.D.
Bromoform	75-25-2	0.5	N.D.
Bromomethane	74-83-9	1.0	N.D.
Carbon Disulfide	75-15-0	0.5	N.D.
Carbon tetrachloride	56-23-5	0.5	N.D.
Chlorobenzene	108-90-7	0.5	N.D.
Chlorodibromomethane	124-48-1	0.5	N.D.
Chloroethane	75-00-3	0.5	N.D.
2-Chloroethyl vinyl ether	110-75-8	0.5	N.D.
Chloroform	67-66-3	0.5	N.D.
Chloromethane	74-87-3	0.5	N.D.
1,1-Dichloroethane	75-34-3	0.5	N.D.
1,2-Dichloroethane	107-06-2	0.5	N.D.
1,1-Dichloroethene	75-35-4	0.5	N.D.
Trans 1,2-Dichloroethene	156-60-5	0.5	N.D.
1,2-Dichloropropane	78-87-5	0.5	N.D.
cis-1,3-Dichloropropene	10061-01-5	0.5	N.D.
trans-1,3-Dichloropropene	10061-02-6	0.5	N.D.
Ethylbenzene	100-41-4	0.5	N.D.
Methylene chloride	75-09-2	2.5	N.D.
Styrene	100-42-5	0.5	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	0.5	N.D.
Tetrachloroethene	127-18-4	0.5	N.D.
Toluene	108-88-3	0.5	N.D.
1,1,1-Trichloroethane	71-55-6	0.5	N.D.
1,1,2-Trichloroethane	79-00-5	0.5	N.D.
Trichloroethene	79-01-6	0.5	N.D.
Trichlorofluoromethane	75-69-4	0.5	N.D.
Vinyl acetate	108-05-4	1.0	N.D.
Vinyl chloride	75-01-4	0.5	N.D.
Total Xylenes	1330-20-7	1.0	N.D.
Dichlorodifluoromethane	75-71-8	0.5	N.D.
cis-1,2-Dichloroethene	156-59-2	0.5	N.D.
2,2-Dichloropropane	594-20-7	0.5	N.D.
Bromochloromethane	74-97-5	0.5	N.D.
1,1-Dichloropropene	563-58-6	0.5	N.D.
Dibromomethane	74-95-3	0.5	N.D.
1,2-Dibromoethane	106-93-4	0.5	N.D.



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4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## VOLATILE ORGANICS BY GC/MS (EPA 8260) (continued)

Sample Description: Water, Equipment Blank  
Laboratory Sample #: 97080231

ANALYTE	CAS NUMBER	DETECTION Limit (ug/l)	SAMPLE RESULTS (ug/l)
1,3-Dichloropropane	142-28-9	0.5	N.D.
Isopropylbenzene	98-82-8	0.5	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	0.5	N.D.
1,2,3-Trichloropropane	96-18-4	0.5	N.D.
Bromobenzene	108-86-1	0.5	N.D.
n-Propylbenzene	103-65-1	0.5	N.D.
2-Chlorotoluene	95-49-8	0.5	N.D.
1,3,5-Trimethylbenzene	108-67-8	0.5	N.D.
4-Chlorotoluene	106-43-4	0.5	N.D.
tert-Butylbenzene	98-06-6	0.5	N.D.
1,2,4-Trimethylbenzene	95-63-6	0.5	N.D.
sec-Butylbenzene	135-98-8	0.5	N.D.
4-Isopropyltoluene	99-87-6	0.5	N.D.
1,3-Dichlorobenzene	541-73-1	0.5	N.D.
1,4-Dichlorobenzene	106-46-7	0.5	N.D.
n-Butylbenzene	104-51-8	0.5	N.D.
1,2-Dichlorobenzene	95-50-1	0.5	N.D.
1-2-Dibromo-3-CPA	96-12-8	1.0	N.D.
1,2,4-Trichlorobenzene	120-82-1	0.5	N.D.
Hexachlorobutadiene	87-68-3	0.5	N.D.
Naphthalene	91-20-3	0.5	N.D.
1,2,3-Trichlorobenzene	87-61-6	0.5	N.D.

---

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical

Mark Noorani  
Mark Noorani  
Laboratory Director

Surrogate Recoveries %

Dibromofluoromethane	103
Toluene-d8	108
4-Bromofluorobenzene	103



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## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

Client Project ID: McDonnell Douglas  
Client Project #: 1206035.01090010

Sample Description: Water, Trip Blank  
Laboratory Sample Number: 97080232  
Laboratory Reference #: MWI 9457

Sampled: 08/15/97  
Received: 08/15/97  
Analyzed: 08/18/97  
Reported: 08/22/97

## VOLATILE ORGANICS BY GC/MS (EPA 8260)

ANALYTE	CAS NUMBER	DETECTION Limit (ug/l)	SAMPLE RESULTS (ug/l)
Benzene	71-43-2	0.5	N.D.
Bromodichloromethane	75-27-4	0.5	N.D.
Bromoform	75-25-2	0.5	N.D.
Bromomethane	74-83-9	1.0	N.D.
Carbon Disulfide	75-15-0	0.5	N.D.
Carbon tetrachloride	56-23-5	0.5	N.D.
Chlorobenzene	108-90-7	0.5	N.D.
Chlorodibromomethane	124-48-1	0.5	N.D.
Chloroethane	75-00-3	0.5	N.D.
2-Chloroethyl vinyl ether	110-75-8	0.5	N.D.
Chloroform	67-66-3	0.5	N.D.
Chloromethane	74-87-3	0.5	N.D.
1,1-Dichloroethane	75-34-3	0.5	N.D.
1,2-Dichloroethane	107-06-2	0.5	N.D.
1,1-Dichloroethene	75-35-4	0.5	N.D.
Trans 1,2-Dichloroethene	156-60-5	0.5	N.D.
1,2-Dichloropropane	78-87-5	0.5	N.D.
cis-1,3-Dichloropropene	10061-01-5	0.5	N.D.
trans-1,3-Dichloropropene	10061-02-6	0.5	N.D.
Ethylbenzene	100-41-4	0.5	N.D.
Methylene chloride	75-09-2	2.5	N.D.
Styrene	100-42-5	0.5	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	0.5	N.D.
Tetrachloroethene	127-18-4	0.5	N.D.
Toluene	108-88-3	0.5	N.D.
1,1,1-Trichloroethane	71-55-6	0.5	N.D.
1,1,2-Trichloroethane	79-00-5	0.5	N.D.
Trichloroethene	79-01-6	0.5	N.D.
Trichlorofluoromethane	75-69-4	0.5	N.D.
Vinyl acetate	108-05-4	1.0	N.D.
Vinyl chloride	75-01-4	0.5	N.D.
Total Xylenes	1330-20-7	1.0	N.D.
Dichlorodifluoromethane	75-71-8	0.5	N.D.
cis-1,2,-Dichloroethene	156-59-2	0.5	N.D.
2,2-Dichloropropane	594-20-7	0.5	N.D.
Bromochloromethane	74-97-5	0.5	N.D.
1,1-Dichloropropene	563-58-6	0.5	N.D.
Dibromomethane	74-95-3	0.5	N.D.
1,2-Dibromoethane	106-93-4	0.5	N.D.



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## VOLATILE ORGANICS BY GC/MS (EPA 8260) (continued)

Sample Description: Water, Trip Blank

Laboratory Sample #: 97080232

ANALYTE	CAS NUMBER	DETECTION Limit (ug/l)	SAMPLE RESULTS (ug/l)
1,3-Dichloropropane	142-28-9	0.5	N.D.
Isopropylbenzene	98-82-8	0.5	N.D.
1,1,2,2-Tetrachloroethane	79-34-5	0.5	N.D.
1,2,3-Trichloropropane	96-18-4	0.5	N.D.
Bromobenzene	108-86-1	0.5	N.D.
n-Propylbenzene	103-65-1	0.5	N.D.
2-Chlorotoluene	95-49-8	0.5	N.D.
1,3,5-Trimethylbenzene	108-67-8	0.5	N.D.
4-Chlorotoluene	106-43-4	0.5	N.D.
tert-Butylbenzene	98-06-6	0.5	N.D.
1,2,4-Trimethylbenzene	95-63-6	0.5	N.D.
sec-Butylbenzene	135-98-8	0.5	N.D.
4-Isopropyltoluene	99-87-6	0.5	N.D.
1,3-Dichlorobenzene	541-73-1	0.5	N.D.
1,4-Dichlorobenzene	106-46-7	0.5	N.D.
n-Butylbenzene	104-51-8	0.5	N.D.
1,2-Dichlorobenzene	95-50-1	0.5	N.D.
1-2-Dibromo-3-CPA	96-12-8	1.0	N.D.
1,2,4-Trichlorobenzene	120-82-1	0.5	N.D.
Hexachlorobutadiene	87-68-3	0.5	N.D.
Naphthalene	91-20-3	0.5	N.D.
1,2,3-Trichlorobenzene	87-61-6	0.5	N.D.

---

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical

Mark Noorani  
Laboratory Director

Surrogate Recoveries %

Dibromofluoromethane	103
Toluene-d8	106
4-Bromofluorobenzene	98



# ORANGE COAST ANALYTICAL, INC.

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4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

Client Project ID: McDonnell Douglas  
Client Project #: 1206035.01090010

Sample Description: Water, Rinsate Blank  
Laboratory Sample Number: 97080230  
Laboratory Reference #: MWI 9457

Sampled: 08/15/97  
Received: 08/15/97  
Analyzed: 08/18/97  
Reported: 08/22/97

## SEMI VOLATILE ORGANICS BY GC/MS (EPA 8270)

ANALYTE	CAS NUMBER	DETECTION Limit (ug/l)	SAMPLE RESULTS (ug/l)
Acenaphthene	83-32-9	5.0	N.D.
Acenaphthylene	208-96-8	5.0	N.D.
Aniline	62-53-3	5.0	N.D.
Anthracene	120-12-7	5.0	N.D.
Benzoic Acid	65-85-0	50	N.D.
Benzo (a) anthracene	56-55-3	5.0	N.D.
Benzo (b) fluoranthene	205-99-2	25	N.D.
Benzo (k) fluoranthene	207-08-9	25	N.D.
Benzo (g,h,i)perylene	191-24-2	25	N.D.
Benzo (a) pyrene	50-32-8	25	N.D.
Benzyl alcohol	100-51-6	50	N.D.
Bis(2-chloroethoxy)methane	111-91-1	5.0	N.D.
Bis(2-chloroethyl)ether	111-44-4	5.0	N.D.
Bis(2-chloroisopropyl)ether	39638-32-9	5.0	N.D.
Bis(2-ethylhexyl)phthalate	117-81-7	3.0	N.D.
4-Bromophenyl phenyl ether	101-55-3	5.0	N.D.
Butyl benzyl phthalate	85-68-7	5.0	N.D.
4-Chloroaniline	106-47-8	5.0	N.D.
2-Chloronaphthalene	91-58-7	5.0	N.D.
4-Chloro-3-methylphenol	59-50-7	5.0	N.D.
2-Chlorophenol	95-57-8	5.0	N.D.
4-Chlorophenyl phenyl ehter	7005-72-3	5.0	N.D.
Chrysene	218-0109	5.0	N.D.
Dibenz(a,h)anthracene	53-70-3	25	N.D.
Dibenzofuran	132-64-9	5.0	N.D.
Di-N-butyl phthalate	84-74-2	5.0	N.D.
1,3-Dichlorobenzene	541-73-1	5.0	N.D.
1,4-Dichlorobenzene	106-46-7	5.0	N.D.
1,2-Dichlorobenzene	95-50-1	5.0	N.D.
3,3-Dichlorobenzidine	91-94-1	5.0	N.D.
2,4-Dichlorophenol	120-83-2	5.0	N.D.
Diethyl phthalate	84-66-2	5.0	N.D.
2,4-Dimethylphenol	105-67-9	5.0	N.D.
Dimethyl phthalate	131-11-3	5.0	N.D.
4,6-Dinitro-2-methylphenol	534-52-1	50	N.D.
2,4-Dinitrophenol	51-28-5	50	N.D.



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## SEMI-VOLATILE ORGANICS BY GC/MS (EPA 8270) (continued)

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Sample Description: Water, Rinsate Blank

Laboratory Sample #: 97080230

### ANALYTE

ANALYTE	CAS NUMBER	DETECTION Limit (ug/l)	SAMPLE RESULTS (ug/l)
2,4-Dinitrotoluene	121-14-2	5.0	N.D.
2,6-Dinitrotoluene	606-20-2	5.0	N.D.
Di-N-octyl phthalate	117-84-0	25	N.D.
Fluoranthene	206-44-0	5.0	N.D.
Fluorene	86-73-7	5.0	N.D.
Hexachlorobenzene	118-74-1	5.0	N.D.
Hexachlorobutadiene	87-68-3	5.0	N.D.
Hexachlorocyclopentadiene	77-47-4	5.0	N.D.
Hexachloroethane	67-72-1	5.0	N.D.
Indeno(1,2,3-cd)pyrene	193-39-5	25	N.D.
Isophorone	78-59-1	5.0	N.D.
2-Methylnaphthalene	91-57-6	5.0	N.D.
2-Methylphenol	95-48-7	5.0	N.D.
4-Methylphenol	106-44-5	5.0	N.D.
Naphthalene	91-20-3	5.0	N.D.
2-Nitroaniline	88-74-4	50	N.D.
3-Nitroaniline	99-09-2	50	N.D.
4-Nitroaniline	100-01-6	50	N.D.
Nitrobenzene	98-95-3	5.0	N.D.
2-Nitrophenol	88-75-5	5.0	N.D.
4-Nitrophenol	100-02-7	50	N.D.
N-Nitrosodiphenylamine	86-30-6	5.0	N.D.
N-Nitroso-di-N-propylamine	621-64-7	5.0	N.D.
N-Nitrosodimethylamine	62-75-9	5.0	N.D.
Pentachlorophenol	87-86-5	50	N.D.
Phenanthrene	85-01-8	5.0	N.D.
Phenol	108-95-2	5.0	N.D.
Pyrene	129-00-0	5.0	N.D.
1,2,4-Trichlorobenzene	120-82-1	5.0	N.D.
2,4,5-Trichlorophenol	95-95-4	5.0	N.D.
2,4,6-Trichlorophenol	88-06-2	5.0	N.D.

---

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical

Mark Noorani  
Mark Noorani  
Laboratory Director



# ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067  
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

Client Project ID: McDonnell Douglas  
Client Project #: 1206035.01090010

Sample Description: Water, Equipment Blank  
Laboratory Sample Number: 97080231  
Laboratory Reference #: MWI 9457

Sampled: 08/15/97  
Received: 08/15/97  
Analyzed: 08/18/97  
Reported: 08/22/97

## SEMI VOLATILE ORGANICS BY GC/MS (EPA 8270)

ANALYTE	CAS NUMBER	DETECTION Limit (ug/l)	SAMPLE RESULTS (ug/l)
Acenaphthene	83-32-9	5.0	N.D.
Acenaphthylene	208-96-8	5.0	N.D.
Aniline	62-53-3	5.0	N.D.
Anthracene	120-12-7	5.0	N.D.
Benzoic Acid	65-85-0	50	N.D.
Benzo (a) anthracene	56-55-3	5.0	N.D.
Benzo (b) fluoranthene	205-99-2	25	N.D.
Benzo (k) fluoranthene	207-08-9	25	N.D.
Benzo (g,h,i)perylene	191-24-2	25	N.D.
Benzo (a) pyrene	50-32-8	25	N.D.
Benzyl alcohol	100-51-6	50	N.D.
Bis(2-chloroethoxy)methane	111-91-1	5.0	N.D.
Bis(2-chloroethyl)ether	111-44-4	5.0	N.D.
Bis(2-chloroisopropyl)ether	39638-32-9	5.0	N.D.
Bis(2-ethylhexyl)phthalate	117-81-7	3.0	N.D.
4-Bromophenyl phenyl ether	101-55-3	5.0	N.D.
Butyl benzyl phthalate	85-68-7	5.0	N.D.
4-Chloroaniline	106-47-8	5.0	N.D.
2-Chloronaphthalene	91-58-7	5.0	N.D.
4-Chloro-3-methylphenol	59-50-7	5.0	N.D.
2-Chlorophenol	95-57-8	5.0	N.D.
4-Chlorophenyl phenyl ehter	7005-72-3	5.0	N.D.
Chrysene	218-0109	5.0	N.D.
Dibenz(a,h)anthracene	53-70-3	25	N.D.
Dibenzofuran	132-64-9	5.0	N.D.
Di-N-butyl phthalate	84-74-2	5.0	N.D.
1,3-Dichlorobenzene	541-73-1	5.0	N.D.
1,4-Dichlorobenzene	106-46-7	5.0	N.D.
1,2-Dichlorobenzene	95-50-1	5.0	N.D.
3,3-Dichlorobenzidine	91-94-1	5.0	N.D.
2,4-Dichlorophenol	120-83-2	5.0	N.D.
Diethyl phthalate	84-66-2	5.0	N.D.
2,4-Dimethylphenol	105-67-9	5.0	N.D.
Dimethyl phthalate	131-11-3	5.0	N.D.
4,6-Dinitro-2-methylphenol	534-52-1	50	N.D.
2,4-Dinitrophenol	51-28-5	50	N.D.



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## SEMI-VOLATILE ORGANICS BY GC/MS (EPA 8270)

(continued)

Sample Description: Water, Equipment Blank

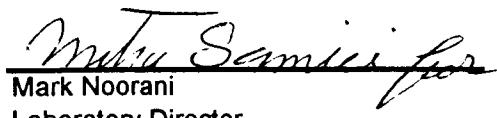
Laboratory Sample #: 97080231

### ANALYTE

	CAS NUMBER	DETECTION Limit (ug/l)	SAMPLE RESULTS (ug/l)
2,4-Dinitrotoluene	121-14-2	5.0	N.D.
2,6-Dinitrotoluene	606-20-2	5.0	N.D.
Di-N-octyl phthalate	117-84-0	25	N.D.
Fluoranthene	206-44-0	5.0	N.D.
Fluorene	86-73-7	5.0	N.D.
Hexachlorobenzene	118-74-1	5.0	N.D.
Hexachlorobutadiene	87-68-3	5.0	N.D.
Hexachlorocyclopentadiene	77-47-4	5.0	N.D.
Hexachloroethane	67-72-1	5.0	N.D.
Indeno(1,2,3-cd)pyrene	193-39-5	25	N.D.
Isophorone	78-59-1	5.0	N.D.
2-Methylnaphthalene	91-57-6	5.0	N.D.
2-Methylphenol	95-48-7	5.0	N.D.
4-Methylphenol	106-44-5	5.0	N.D.
Naphthalene	91-20-3	5.0	N.D.
2-Nitroaniline	88-74-4	50	N.D.
3-Nitroaniline	99-09-2	50	N.D.
4-Nitroaniline	100-01-6	50	N.D.
Nitrobenzene	98-95-3	5.0	N.D.
2-Nitrophenol	88-75-5	5.0	N.D.
4-Nitrophenol	100-02-7	50	N.D.
N-Nitrosodiphenylamine	86-30-6	5.0	N.D.
N-Nitroso-di-N-propylamine	621-64-7	5.0	N.D.
N-Nitrosodimethylamine	62-75-9	5.0	N.D.
Pentachlorophenol	87-86-5	50	N.D.
Phenanthrene	85-01-8	5.0	N.D.
Phenol	108-95-2	5.0	N.D.
Pyrene	129-00-0	5.0	N.D.
1,2,4-Trichlorobenzene	120-82-1	5.0	N.D.
2,4,5-Trichlorophenol	95-95-4	5.0	N.D.
2,4,6-Trichlorophenol	88-06-2	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical

  
Mark Noorani  
Laboratory Director



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4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

**Client Project ID:** McDonnell Douglas  
**Client Project #:** 1206035.01090010

**Sample Description:** Water, Rinsate Blank

**Sampled:** 08/15/97

**Received:** 08/15/97

**Analyzed:** 08/22/97

**Reported:** 08/22/97

**Laboratory Sample Number:** 97080230

**Laboratory Reference #:** MWI 9457

## ORGANOCHLORINE PESTICIDES (EPA 8080)

<b>Analyte</b>	<b>CAS NUMBER</b>	<b>DETECTION LIMITS (ug/l)</b>	<b>SAMPLE RESULTS (ug/l)</b>
Aldrin	309-00-2	0.1	N.D.
alpha-BHC	319-84-6	0.2	N.D.
beta-BHC	319-85-7	0.2	N.D.
gamma-BHC	319-86-8	0.2	N.D.
gamma-BHC (Lindane)	58-89-9	0.2	N.D.
Chlordane	57-74-9	0.2	N.D.
4,4'-DDD	72-54-9	0.5	N.D.
4,4'-DDE	72-55-9	0.1	N.D.
4,4'-DDT	50-29-3	0.1	N.D.
Dieldrin	60-57-1	0.5	N.D.
Endosulfan I	959-98-8	0.5	N.D.
Endosulfan II	33213-65-9	0.5	N.D.
Endosulfan sulfate	1031-07-8	0.5	N.D.
Endrin	72-20-8	0.02	N.D.
Endrin aldehyde	7421-93-4	0.2	N.D.
Heptachlor	76-44-8	0.1	N.D.
Heptachlor epoxide	1024-57-3	0.2	N.D.
Methoxychlor	72-43-5	9.0	N.D.
Toxaphene	8001-35-2	0.5	N.D.

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Analytes reported as N.D. were not present above the stated limit of detection.

ORANGE COAST ANALYTICAL

*Mark Noorani*  
Mark Noorani  
Laboratory Director



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## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

Client Project ID: McDonnell Douglas  
Client Project #: 1206035.01090010

**Sample Description:** Water, Equipment Blank

**Sampled:** 08/15/97

**Received:** 08/15/97

**Analyzed:** 08/22/97

**Reported:** 08/22/97

**Laboratory Sample Number:** 97080231

**Laboratory Reference #:** MWI 9457

## ORGANOCHLORINE PESTICIDES (EPA 8080)

<b>Analyte</b>	<b>CAS NUMBER</b>	<b>DETECTION LIMITS (ug/l)</b>	<b>SAMPLE RESULTS (ug/l)</b>
Aldrin	309-00-2	0.1	N.D.
alpha-BHC	319-84-6	0.2	N.D.
beta-BHC	319-85-7	0.2	N.D.
gamma-BHC	319-86-8	0.2	N.D.
gamma-BHC (Lindane)	58-89-9	0.2	N.D.
Chlordane	57-74-9	0.2	N.D.
4,4'-DDD	72-54-9	0.5	N.D.
4,4'-DDE	72-55-9	0.1	N.D.
4,4'-DDT	50-29-3	0.1	N.D.
Dieldrin	60-57-1	0.5	N.D.
Endosulfan I	959-98-8	0.5	N.D.
Endosulfan II	33213-65-9	0.5	N.D.
Endosulfan sulfate	1031-07-8	0.5	N.D.
Endrin	72-20-8	0.02	N.D.
Endrin aldehyde	7421-93-4	0.2	N.D.
Heptachlor	76-44-8	0.1	N.D.
Heptachlor epoxide	1024-57-3	0.2	N.D.
Methoxychlor	72-43-5	9.0	N.D.
Toxaphene	8001-35-2	0.5	N.D.

---

Analytes reported as N.D. were not present above the stated limit of detection.

ORANGE COAST ANALYTICAL

*Mark Noorani*  
Mark Noorani  
Laboratory Director



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## Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

**Client Project ID:** McDonnell Douglas  
**Client Project #:** 1206035.01090010

**Sample Description:** Water, Rinsate Blank

**Sampled:** 08/15/97

**Received:** 08/15/97

**Analyzed:** 08/21/97

**Reported:** 08/22/97

**Laboratory Sample Number:** 97080230  
**Laboratory Reference #:** MWI 9457

## PCB'S (EPA 8080)

<b>Analyte</b>	<b>CAS NUMBER</b>	<b>DETECTION LIMITS (ug/l)</b>	<b>SAMPLE RESULTS (ug/l)</b>
PCB-1016	12674-11-2	5.0	N.D.
PCB-1221	11104-28-2	5.0	N.D.
PCB-1232	11141-16-5	5.0	N.D.
PCB-1242	53469-21-9	5.0	N.D.
PCB-1248	12672-29-6	5.0	N.D.
PCB-1254	11097-69-1	5.0	N.D.
PCB-1260	11096-82-5	5.0	N.D.

---

Analytes reported as N.D. were not present above the stated limit of detection.

ORANGE COAST ANALYTICAL

Mark Noorani  
Mark Noorani  
Laboratory Director



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### Montgomery Watson

ATTN: Mr. Fred Strauss  
250 N. Madison Ave.  
Pasadena, CA 91101

Client Project ID: McDonnell Douglas  
Client Project #: 1206035.01090010

**Sample Description:** Water, Equipment Blank

**Sampled:** 08/15/97

**Received:** 08/15/97

**Analyzed:** 08/21/97

**Reported:** 08/22/97

**Laboratory Sample Number:** 97080231  
**Laboratory Reference #:** MWI 9457

### PCB'S (EPA 8080)

<b>Analyte</b>	<b>CAS NUMBER</b>	<b>DETECTION LIMITS (ug/l)</b>	<b>SAMPLE RESULTS (ug/l)</b>
PCB-1016	12674-11-2	5.0	N.D.
PCB-1221	11104-28-2	5.0	N.D.
PCB-1232	11141-16-5	5.0	N.D.
PCB-1242	53469-21-9	5.0	N.D.
PCB-1248	12672-29-6	5.0	N.D.
PCB-1254	11097-69-1	5.0	N.D.
PCB-1260	11096-82-5	5.0	N.D.

---

Analytes reported as N.D. were not present above the stated limit of detection.

ORANGE COAST ANALYTICAL

Mark Noorani

Mark Noorani

Laboratory Director



# ORANGE COAST ANALYTICAL, INC.

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## QC DATA REPORT

Analysis : Semi-Volatile Organics by GC/MS (EPA 8270)

Date of Analysis : 08/18/97

Laboratory Sample No : OCA 100

Laboratory Reference No : MWI 9457

Analyte	R1 (ng)	SP (ng)	MS (ng)	MSD (ng)	PR1 %	PR2 %	RPD %
1,4-Dichlorobenzene	0.0	50	36	35	72	70	3
n-Nitroso-di-n-propylamine	0.0	50	46	43	92	86	7
1,2,4-Trichlorobenzene	0.0	50	41	41	82	82	0
Acenaphthene	0.0	50	46	43	92	86	7
Pyrene	0.0	50	49	49	98	98	0
Pentachlorophenol	0.0	100	88	77	88	77	13
4-Chloro-3-Methylphenol	0.0	100	83	75	83	75	10
2-Chlorophenol	0.0	100	78	71	78	71	9
Phenol	0.0	100	31	28	31	28	10

### Definition of Terms :

R1	Results Of First Analysis
SP	Spike Concentration Added to Sample
MS	Matrix Spike Results
MSD	Matrix Spike Duplicate Results
PR1	Percent Recovery Of MS: $\{(MS-R1) / SP\} \times 100$
PR2	Percent Recovery Of MSD: $\{(MSD-R1) / SP\} \times 100$
RPD	Relative Percent Difference: $\{(MS-MSD) / (MS+MSD)\} \times 100 \times 2$

ORANGE COAST ANALYTICAL

*Mark Noorani*  
MARK NOORANI  
Laboratory Director



# ORANGE COAST ANALYTICAL, INC.

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4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## QC DATA REPORT

Analysis : Semi-Volatile Organics by GC/MS (EPA 8270)

Date of Analysis : 08/18/97

Laboratory Sample No : 97080229

Laboratory Reference No : MWI 9457

Analyte	R1 (ng)	SP (ng)	MS (ng)	MSD (ng)	PR1 %	PR2 %	RPD %
1,4-Dichlorobenzene	0.0	50	42	42	84	84	0
n-Nitroso-di-n-propylamine	0.0	50	53	51	106	102	4
1,2,4-Trichlorobenzene	0.0	50	46	45	92	90	2
Acenaphthene	0.0	50	44	45	88	90	2
Pyrene	0.0	50	45	44	90	88	2
Pentachlorophenol	0.0	100	82	80	82	80	2
4-Chloro-3-Methylphenol	0.0	100	85	80	85	80	6
2-Chlorophenol	0.0	100	79	77	79	77	3
Phenol	0.0	100	70	68	70	68	3

### Definition of Terms :

R1	Results Of First Analysis
SP	Spike Concentration Added to Sample
MS	Matrix Spike Results
MSD	Matrix Spike Duplicate Results
PR1	Percent Recovery Of MS: $\{(MS-R1) / SP\} \times 100$
PR2	Percent Recovery Of MSD: $\{(MSD-R1) / SP\} \times 100$
RPD	Relative Percent Difference: $\{(MS-MSD) / (MS + MSD)\} \times 100 \times 2$

ORANGE COAST ANALYTICAL

Mark Noorani  
MARK NOORANI  
Laboratory Director



# ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067  
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

## QC DATA REPORT

Analysis : Volatile Organics by GC/MS (EPA 8260)

Date of Analysis : 08/18/97

Laboratory Sample No : 97080229

Laboratory Reference No : MWI 9457

Analyte	R1 (ppb)	SP (ppb)	MS (ppb)	MSD (ppb)	PR1 %	PR2 %	RPD %
Benzene	0.0	50	52	46	104	92	12
1,1-Dichloroethene	0.0	50	56	49	112	98	13
Trichloroethene	0.0	50	55	49	110	98	12
Toluene	0.0	50	55	49	110	98	12
Chlorobenzene	0.0	50	51	45	102	90	13

### Definition of Terms :

R1                   Results Of First Analysis

SP                   Spike Concentration Added to Sample

MS                   Matrix Spike Results

MSD                 Matrix Spike Duplicate Results

PR1                 Percent Recovery Of MS:  $\{(MS-R1) / SP\} \times 100$

PR2                 Percent Recovery Of MSD:  $\{(MSD-R1) / SP\} \times 100$

RPD                 Relative Percent Difference:  $\{(MS-MSD) / (MS+MSD)\} \times 100 \times 2$

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## QC DATA REPORT

Analysis : Volatile Organics by GC/MS (EPA 8260)

Date of Analysis : 08/21/97

Laboratory Sample No : OCA 200

Laboratory Reference No : MWI 9457

Analyte	R1 (ppb)	SP (ppb)	MS (ppb)	MSD (ppb)	PR1 %	PR2 %	RPD %
Benzene	0.0	50	50	50	100	100	0
1,1-Dichloroethene	0.0	50	47	49	94	98	4
Trichloroethene	0.0	50	46	47	92	94	2
Toluene	0.0	50	51	54	102	108	6
Chlorobenzene	0.0	50	51	52	102	104	2

### Definition of Terms :

R1                   Results Of First Analysis

SP                   Spike Concentration Added to Sample

MS                   Matrix Spike Results

MSD                 Matrix Spike Duplicate Results

PR1                 Percent Recovery Of MS:  $\{(MS-R1) / SP\} \times 100$

PR2                 Percent Recovery Of MSD:  $\{(MSD-R1) / SP\} \times 100$

RPD                 Relative Percent Difference:  $\{(MS-MSD) / (MS + MSD)\} \times 100 \times 2$

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## QC DATA REPORT

Analysis : Volatile Organics by GC/MS (EPA 8260)

Date of Analysis : 08/18/97

Laboratory Sample No : 97080232

Laboratory Reference No : MWI 9457

Analyte	R1 (ppb)	SP (ppb)	MS (ppb)	MSD (ppb)	PR1 %	PR2 %	RPD %
Benzene	0.0	20	18	19	90	95	5
1,1-Dichloroethene	0.0	20	17	18	85	90	6
Trichloroethene	0.0	20	16	17	80	85	6
Toluene	0.0	20	19	20	95	100	5
Chlorobenzene	0.0	20	18	19	90	95	5

### Definition of Terms :

R1                   Results Of First Analysis

SP                   Spike Concentration Added to Sample

MS                   Matrix Spike Results

MSD                 Matrix Spike Duplicate Results

PR1                 Percent Recovery Of MS:  $\{(MS-R1) / SP\} \times 100$

PR2                 Percent Recovery Of MSD:  $\{(MSD-R1) / SP\} \times 100$

RPD                 Relative Percent Difference:  $\{(MS-MSD) / (MS + MSD)\} \times 100 \times 2$

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## QC DATA REPORT

Analysis : PCB 'S ( EPA 8080 )

Date of Analysis : 08/21/97

Laboratory Sample No : OCA 100

Laboratory Reference No : MWI 9457

Analyte	R1 (ppb)	SP (ppb)	MS (ppb)	MSD (ppb)	PR1 %	PR2 %	RPD %
PCB-1260	0.0	20	16	14	80	70	13

### Definition of Terms :

R1                   Results Of First Analysis

SP                   Spike Concentration Added to Sample

MS                   Matrix Spike Results

MSD                 Matrix Spike Duplicate Results

PR1                 Percent Recovery Of MS:  $\{(MS-R1) / SP\} \times 100$

PR2                 Percent Recovery Of MSD:  $\{(MSD-R1) / SP\} \times 100$

RPD                 Relative Percent Difference:  $\{(MS-MSD) / (MS + MSD)\} \times 100 \times 2$

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## QC DATA REPORT

Analysis : Organochlorine Pesticides (EPA 8080)

Date of Analysis : 08/22/97

Laboratory Sample No : OCA 100

Laboratory Reference No : MWI 9457

Analyte	R1 (ppb)	SP (ppb)	MS (ppb)	MSD (ppb)	PR1 %	PR2 %	RPD %
4,4'-DDT	0.0	1.0	0.76	0.78	76	78	3

Definition of Terms :

R1                      Results Of First Analysis

SP                      Spike Concentration Added to Sample

MS                      Matrix Spike Results

MSD                    Matrix Spike Duplicate Results

PR1                    Percent Recovery Of MS:  $\{(MS-R1) / SP\} \times 100$

PR2                    Percent Recovery Of MSD:  $\{(MSD-R1) / SP\} \times 100$

RPD                    Relative Percent Difference:  $\{(MS-MSD) / (MS + MSD)\} \times 100 \times 2$

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### QC DATA REPORT

Analysis : Total Recoverable Petroleum Hydrocarbons (EPA 418.1)

Date of Analysis : 08/21/97

Laboratory Sample No : OCA 100

Laboratory Reference No : MWI 9457

Analyte	R1 (ppm)	SP (ppm)	MS (ppm)	MSD (ppm)	PR1 %	PR2 %	RPD %
Hydrocarbons	0.0	2.5	2.3	2.4	92	96	4

#### Definition of Terms :

R1                   Results Of First Analysis

SP                   Spike Concentration Added to Sample

MS                   Matrix Spike Results

MSD                 Matrix Spike Duplicate Results

PR1                 Percent Recovery Of MS:  $\{(MS-R1) / SP\} \times 100$

PR2                 Percent Recovery Of MSD:  $\{(MSD-R1) / SP\} \times 100$

RPD                 Relative Percent Difference:  $\{(MS-MSD) / (MS + MSD)\} \times 100 \times 2$

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## QC DATA REPORT

Analysis : Metals

Date of Analysis : 08/20/97

Laboratory Sample No : 97080213

Laboratory Reference No : MWI 9457

Analyte	R1 (ppm)	SP (ppm)	MS (ppm)	MSD (ppm)	PR1 %	PR2 %	RPD %
Antimony	0.0	30.0	29.0	27.0	97	90	7
Arsenic	0.0	10.0	9.4	8.7	94	87	8
Barium	14.0	10.0	23.7	22.2	97	82	7
Beryllium	0.00	1.00	0.99	1.00	99	100	1
Cadmium	0.00	1.00	1.00	0.94	100	94	6
Chromium (Total )	3.10	5.00	7.40	7.30	86	84	1
Chromium ( VI )	0.00	1.00	0.86	0.83	86	83	4
Cobalt	1.10	1.00	2.00	2.00	90	90	0
Copper	1.50	1.00	2.35	2.30	85	80	2
Lead	0.00	10.0	8.4	8.0	84	80	5
Mercury	0.000	0.020	0.017	0.017	85	85	0
Molybdenum	0.0	10.0	9.7	9.6	97	96	1
Nickel	1.20	5.00	5.5	5.2	86	80	6
Selenium	0.0	10.0	10.1	9.4	101	94	7
Silver	0.0	5.0	3.7	3.8	74	76	3
Thallium	0.0	20.0	19.0	18.0	95	90	5
Vanadium	3.7	5.0	8.2	8.2	90	90	0
Zinc	5.0	5.0	9.3	9.3	86	86	0

### Definition of Terms :

R1	Results Of First Analysis
SP	Spike Concentration Added to Sample
MS	Matrix Spike Results
MSD	Matrix Spike Duplicate Results
PR1	Percent Recovery Of MS: $\{(MS-R1) / SP\} \times 100$
PR2	Percent Recovery Of MSD: $\{(MSD-R1) / SP\} \times 100$
RPD	Relative Percent Difference: $\{(MS-MSD) / (MS + MSD)\} \times 100 \times 2$

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## QC DATA REPORT

Analysis : Metals

Date of Analysis : 08/20/97

Laboratory Sample No : 97080189

Laboratory Reference No : MWI 9457

Analyte	R1 (ppm)	SP (ppm)	MS (ppm)	MSD (ppm)	PR1 %	PR2 %	RPD %
Antimony	0.00	3.00	3.60	3.40	120	113	6
Arsenic	0.00	1.00	1.20	1.15	120	115	4
Barium	0.000	0.100	0.116	0.110	116	110	5
Beryllium	0.00	0.100	0.120	0.119	120	119	1
Cadmium	0.00	0.100	0.120	0.120	120	120	0
Chromium ( VI )	0.00	0.50	0.49	0.48	98	96	2
Chromium (Total)	0.00	0.100	0.110	0.108	110	108	2
Cobalt	0.00	0.100	0.120	0.105	120	105	13
Copper	0.000	0.100	0.100	0.111	100	111	10
Lead	0.00	1.00	1.20	1.16	120	116	3
Mercury	0.000	0.020	0.022	0.021	110	105	5
Molybdenum	0.00	1.00	1.16	1.20	116	120	3
Nickel	0.00	0.50	0.58	0.60	116	120	3
Selenium	0.00	1.00	1.20	1.20	120	120	0
Silver	0.00	0.50	0.58	0.57	116	114	2
Thallium	0.00	3.00	3.60	3.50	120	117	3
Vanadium	0.00	0.50	0.56	0.52	112	104	7
Zinc	0.000	0.100	0.112	0.111	112	111	1

### Definition of Terms :

R1	Results Of First Analysis
SP	Spike Concentration Added to Sample
MS	Matrix Spike Results
MSD	Matrix Spike Duplicate Results
PR1	Percent Recovery Of MS: $\{(MS-R1) / SP\} \times 100$
PR2	Percent Recovery Of MSD: $\{(MSD-R1) / SP\} \times 100$
RPD	Relative Percent Difference: $\{(MS-MSD) / (MS + MSD)\} \times 100 \times 2$

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